



#1961
37-03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of : **Confirmation No. 2601**
Mitsuaki OSHIMA et al. : **Docket No. 2000_1326**
Serial No. 09/669,916 : **Group Art Unit 2634**
Filed September 25, 2000 : **Examiner A. Le**
COMMUNICATION SYSTEM :

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Technology Center 2600

SUBMISSION OF FORMAL DRAWINGS

Assistant Commissioner for Patents,
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ACCOUNT NO. 23-0975

Sir:

As required by the Examiner in the Office Action mailed August 28, 2002, 178 sheets of
formal (8½ x 11) drawings (Figs. 1-179) are submitted herewith.

Respectfully submitted,

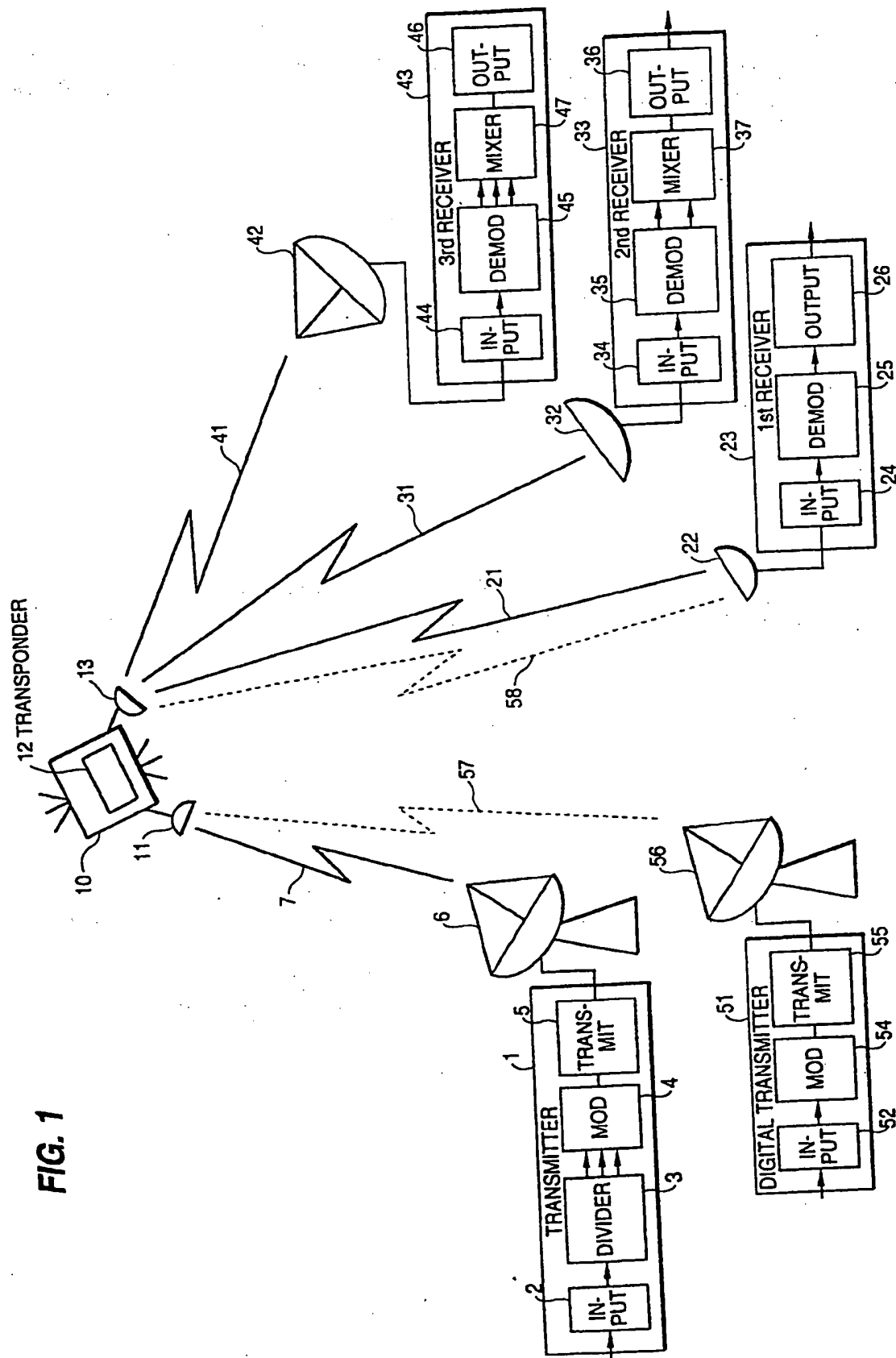
Mitsuaki OSHIMA et al.

By: 

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Washington, D.C. 20006-1021
Telephone (202) 721-8200
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February 28, 2003

FIG. 1



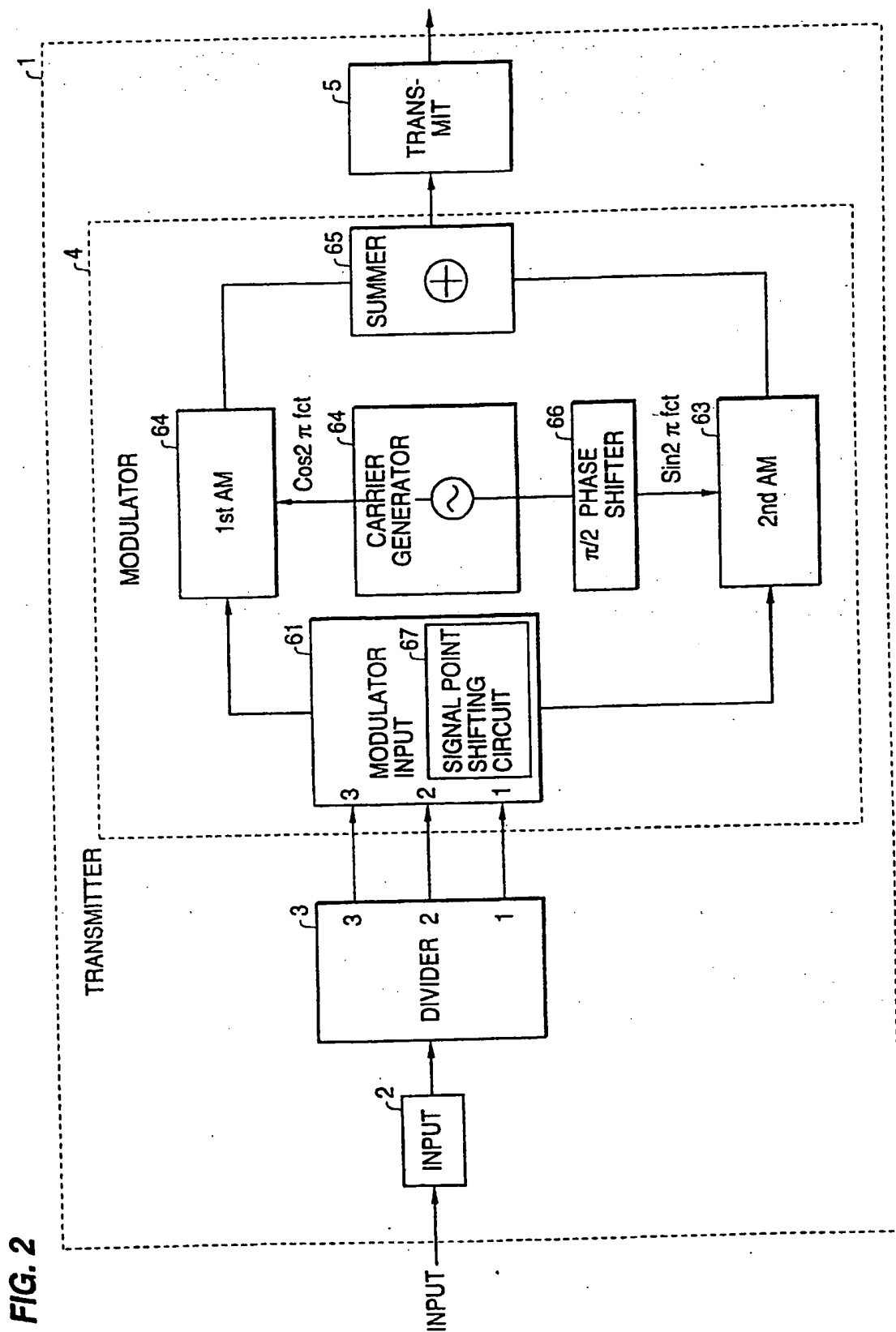


FIG. 3

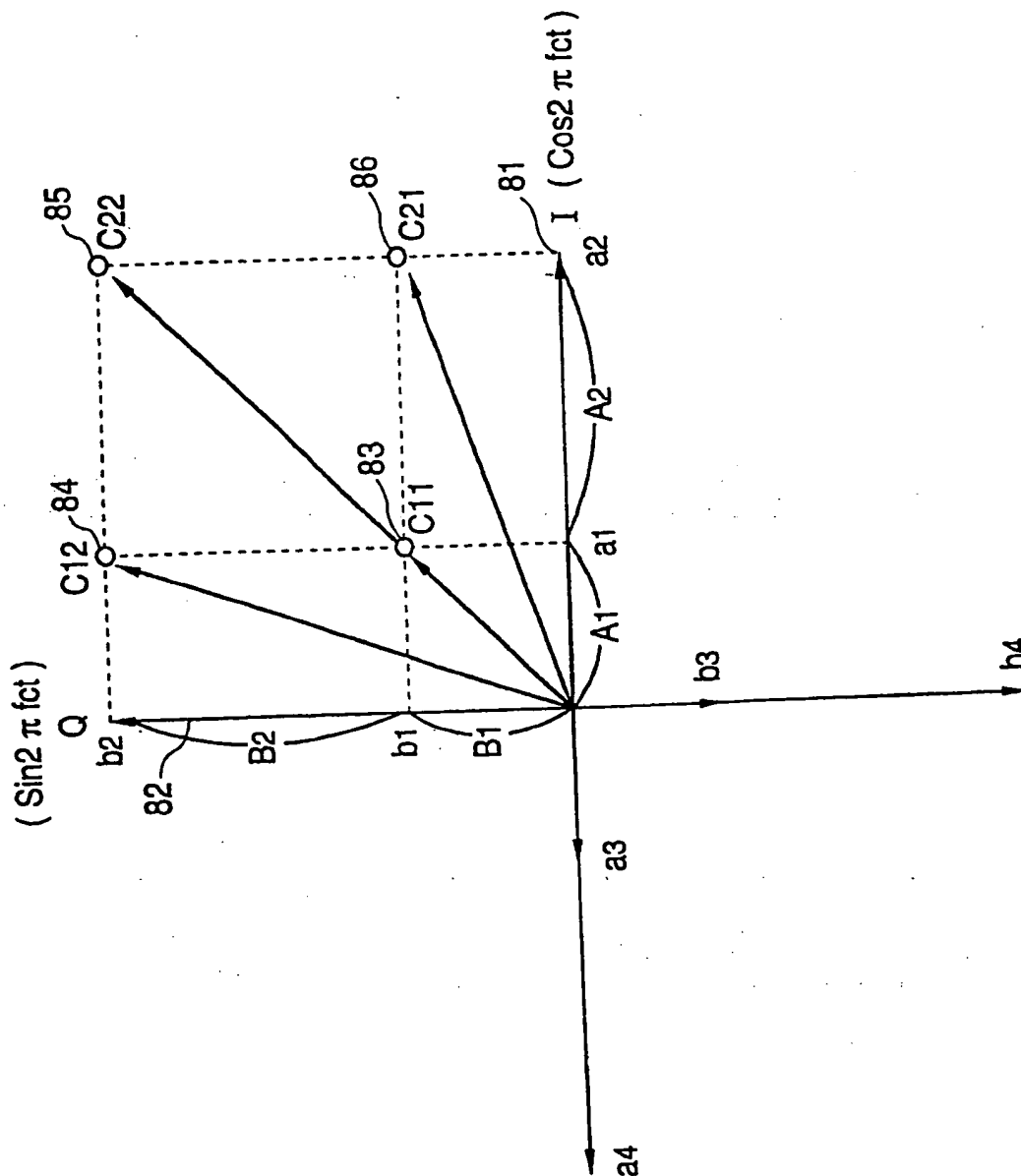


FIG. 4

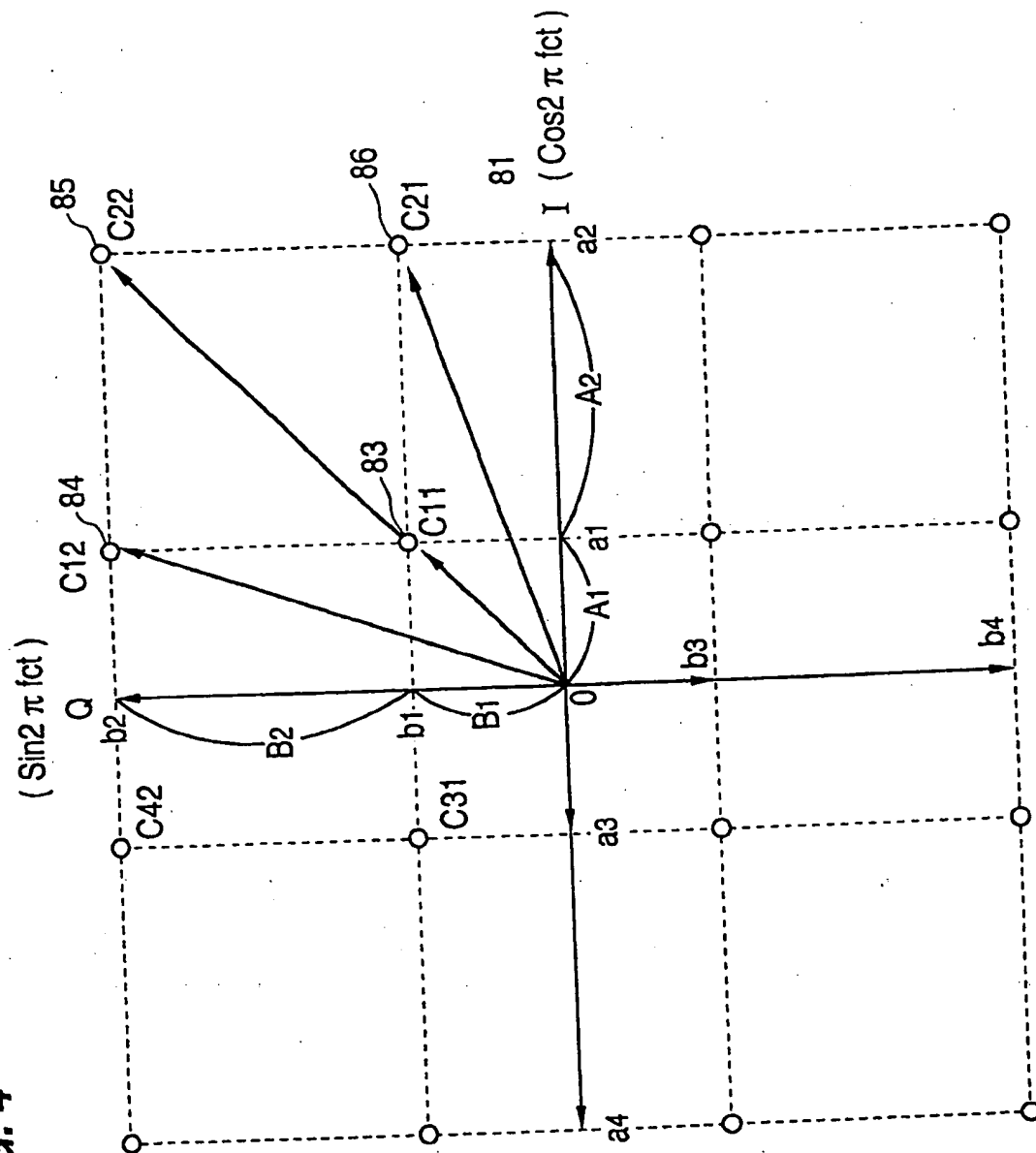


FIG. 5

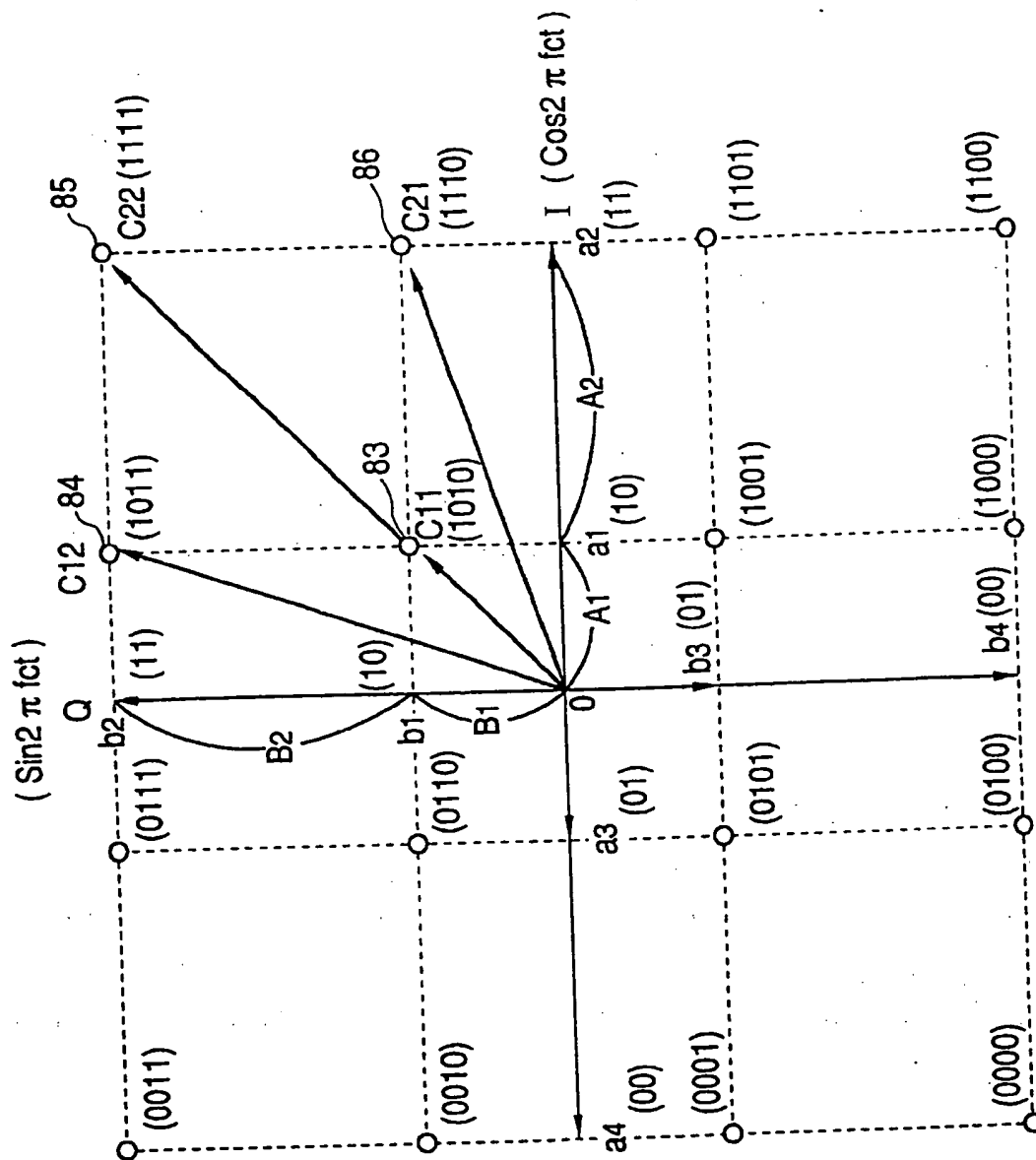


FIG. 6

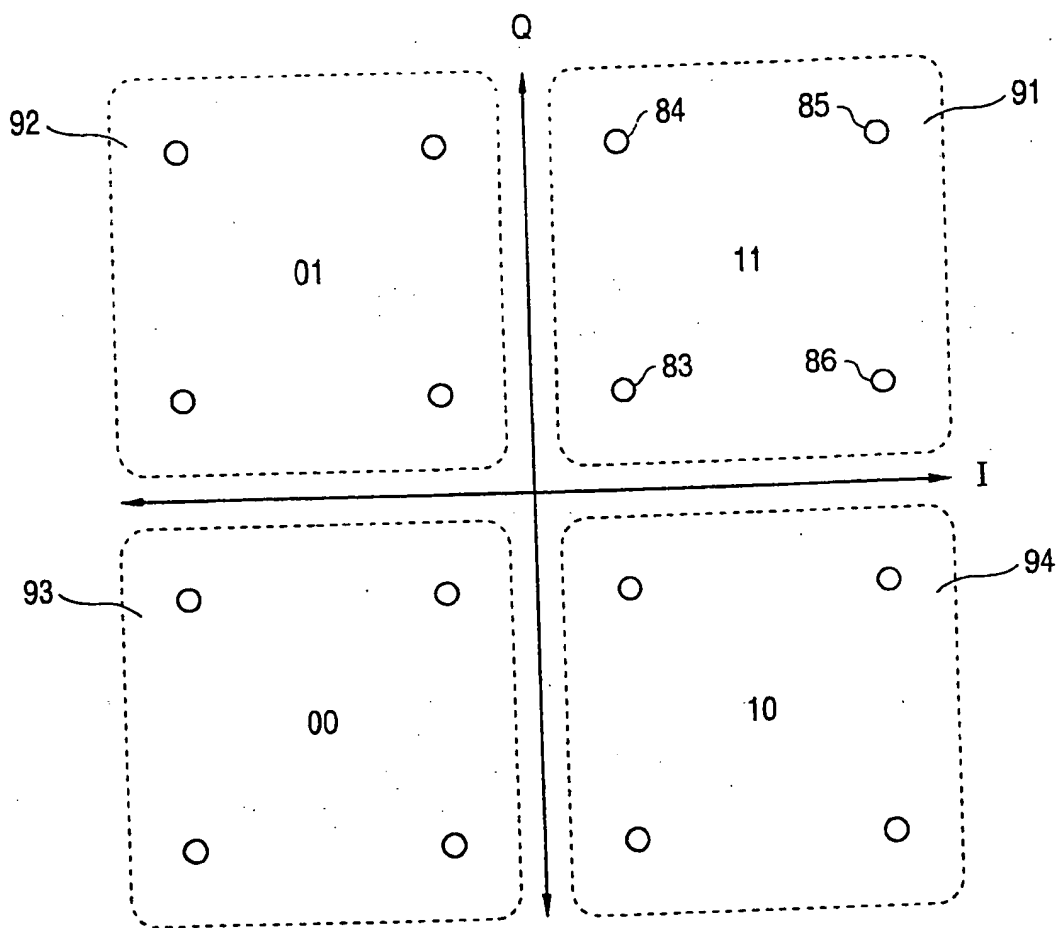


FIG. 7

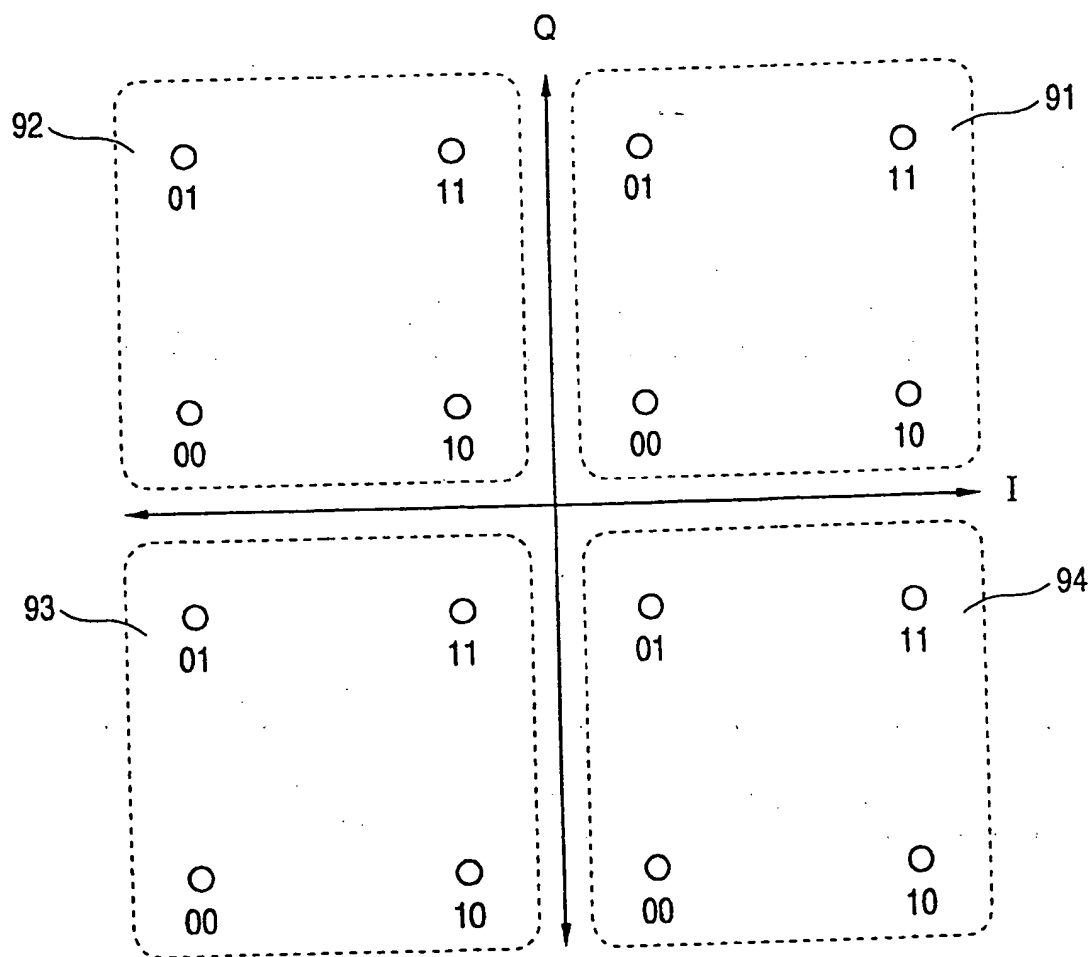


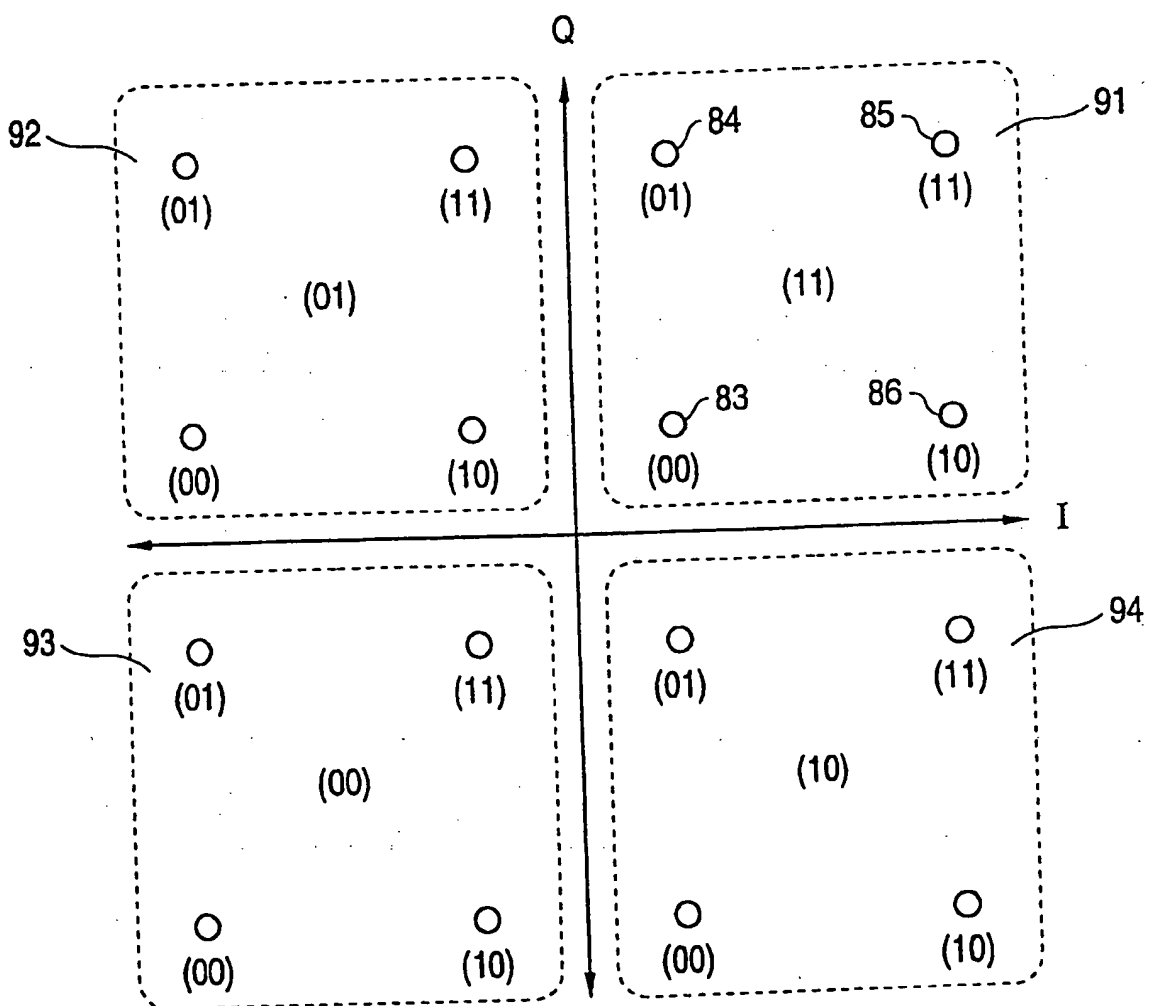
FIG. 8

FIG. 9

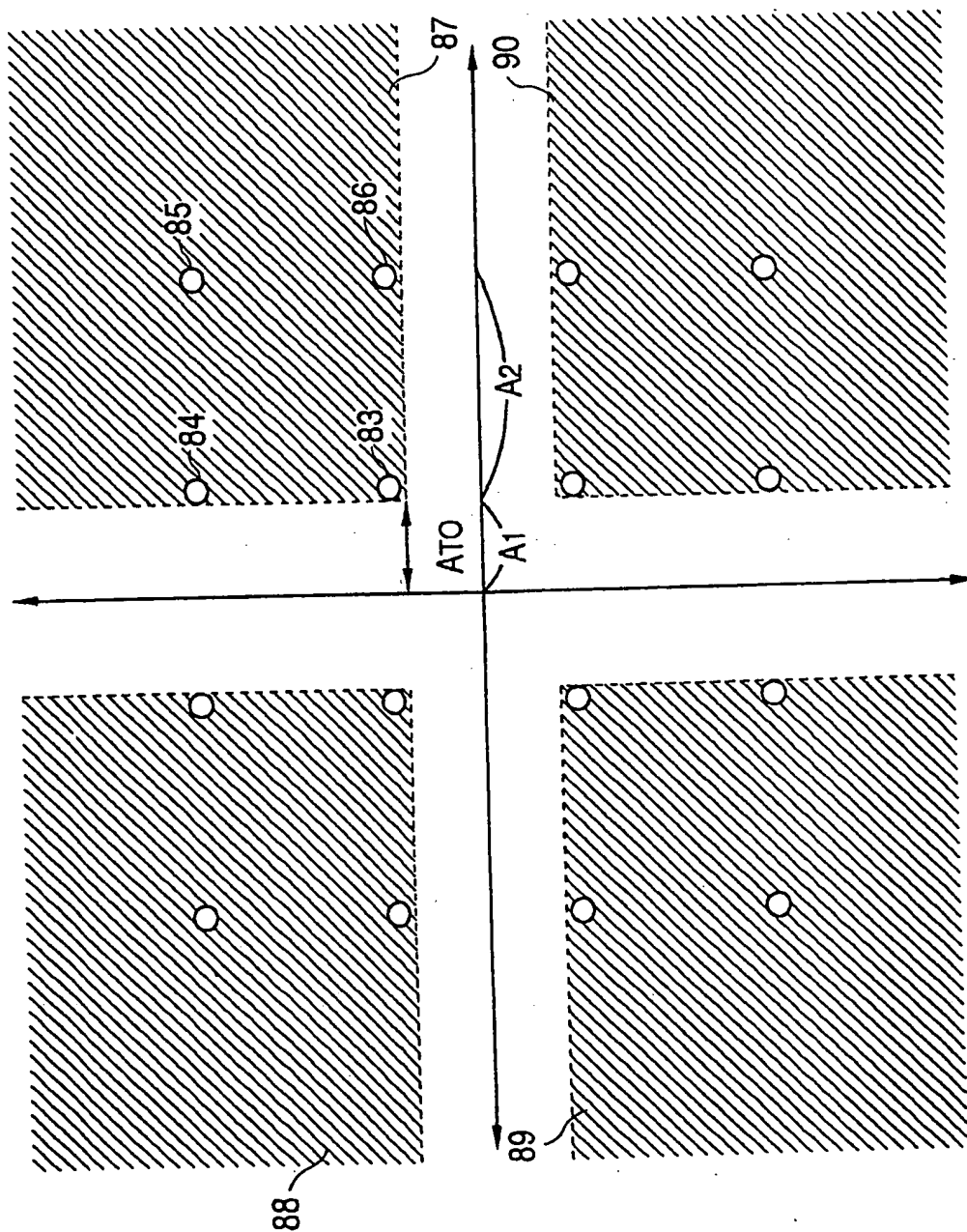


FIG. 10

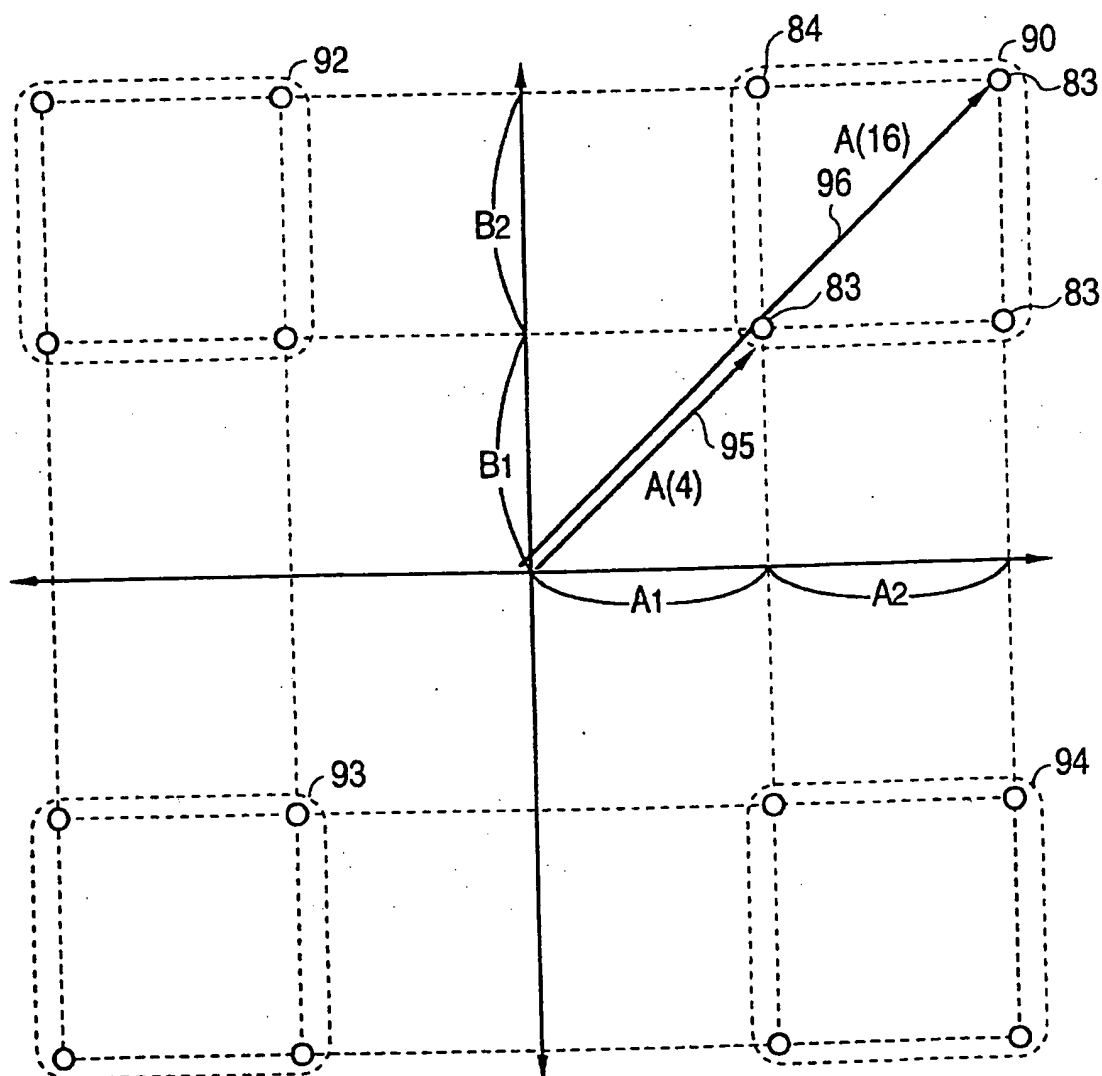


FIG. 11

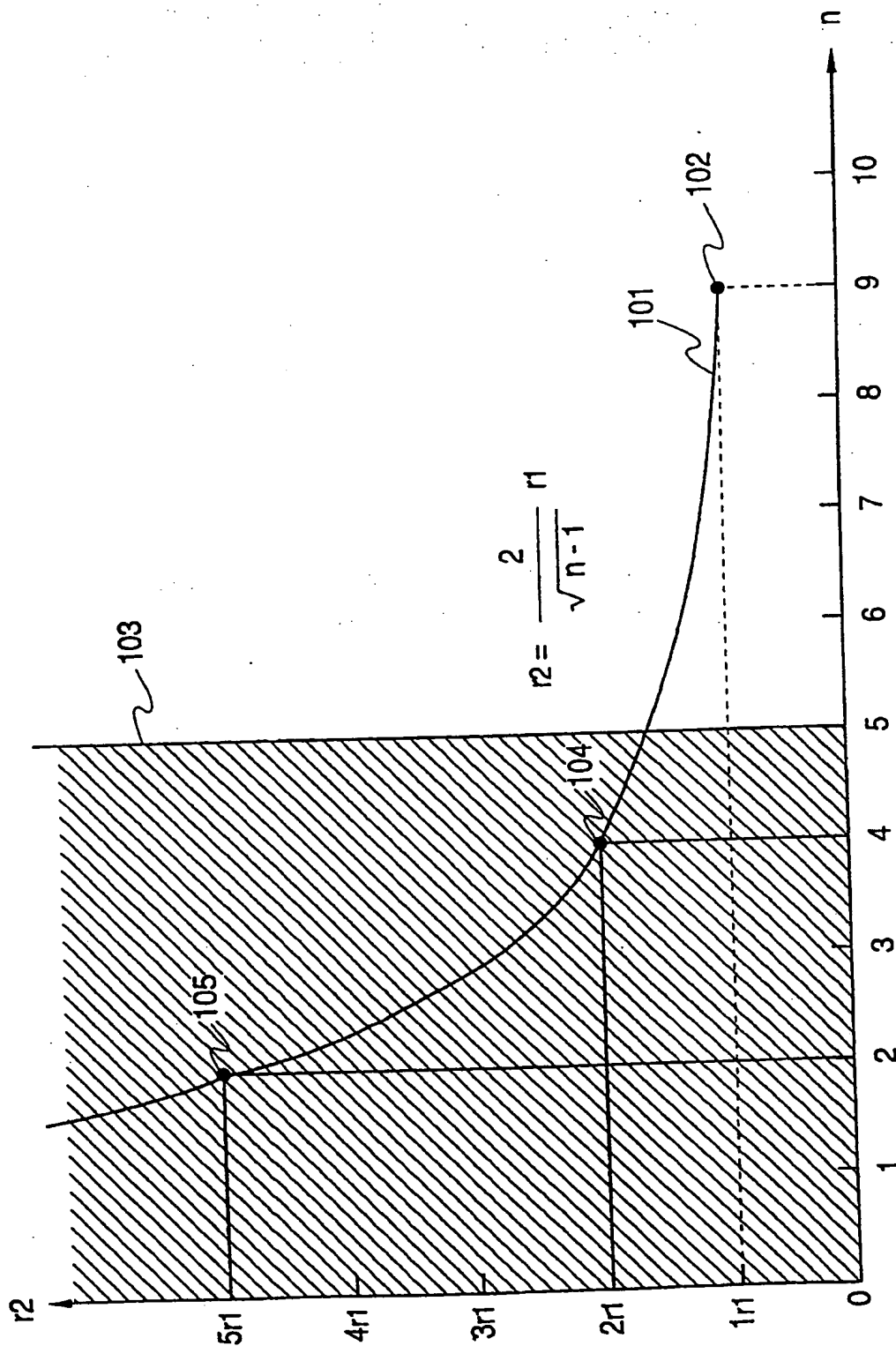


FIG. 12

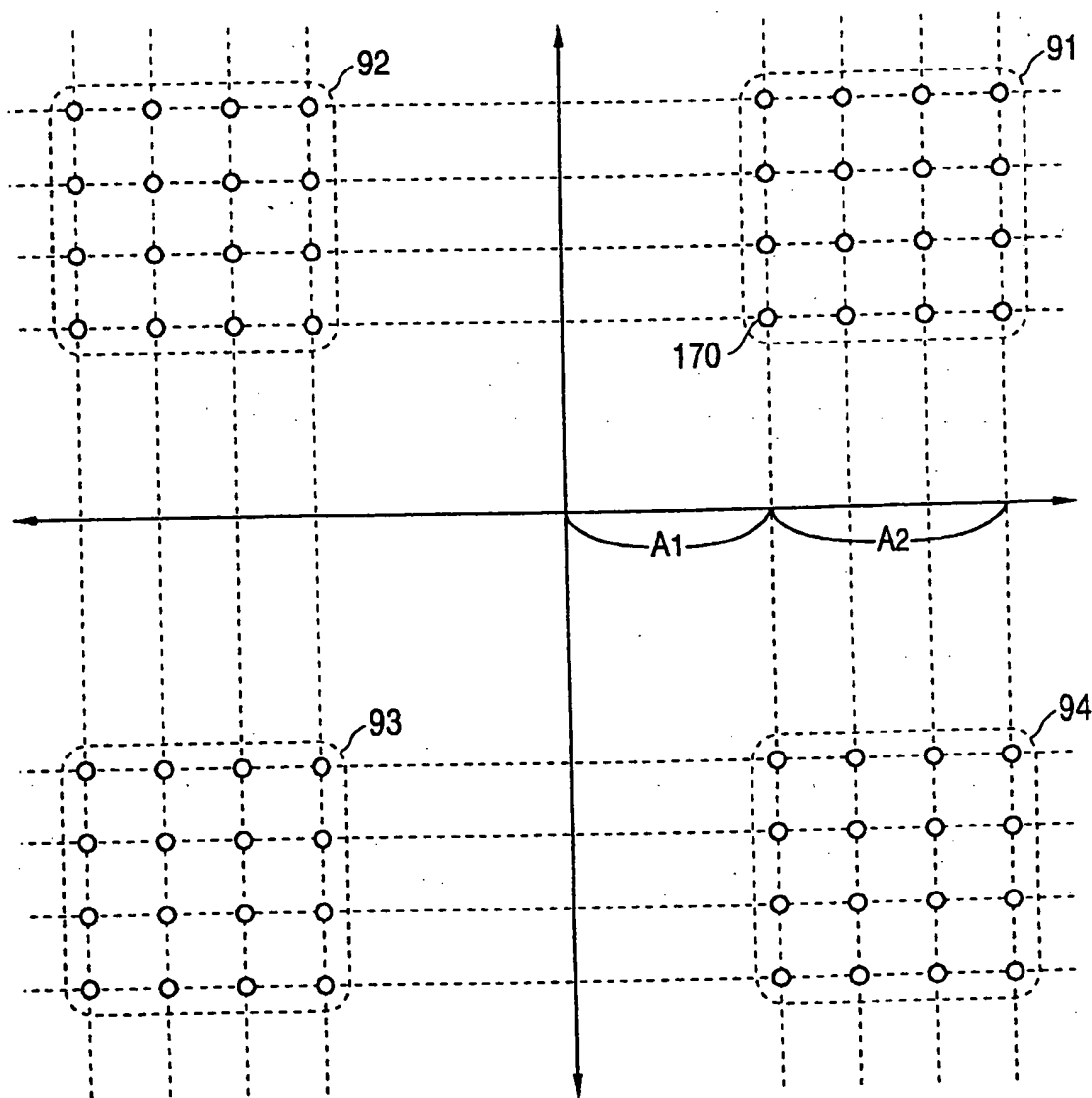


FIG. 13

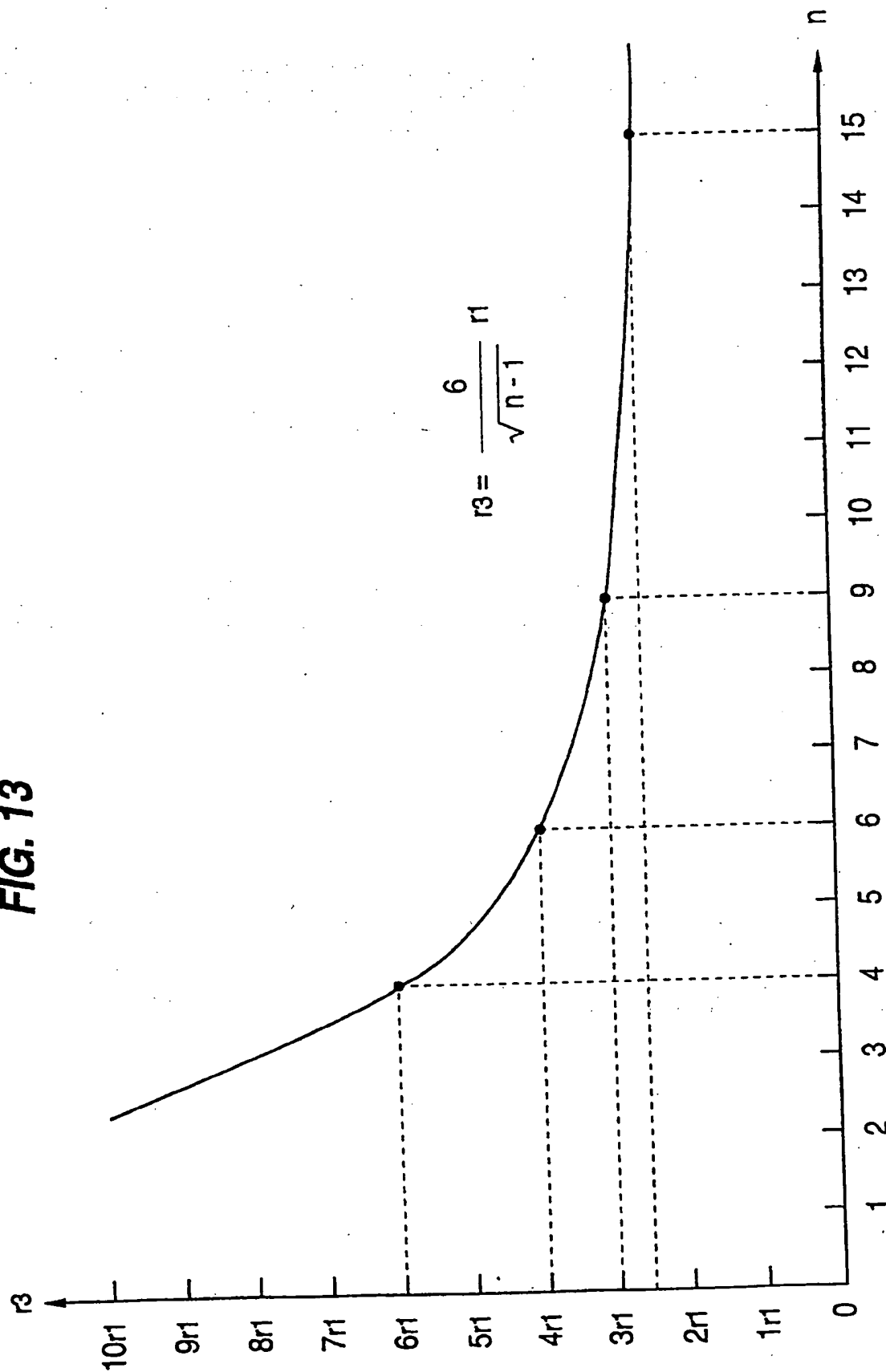


FIG. 14

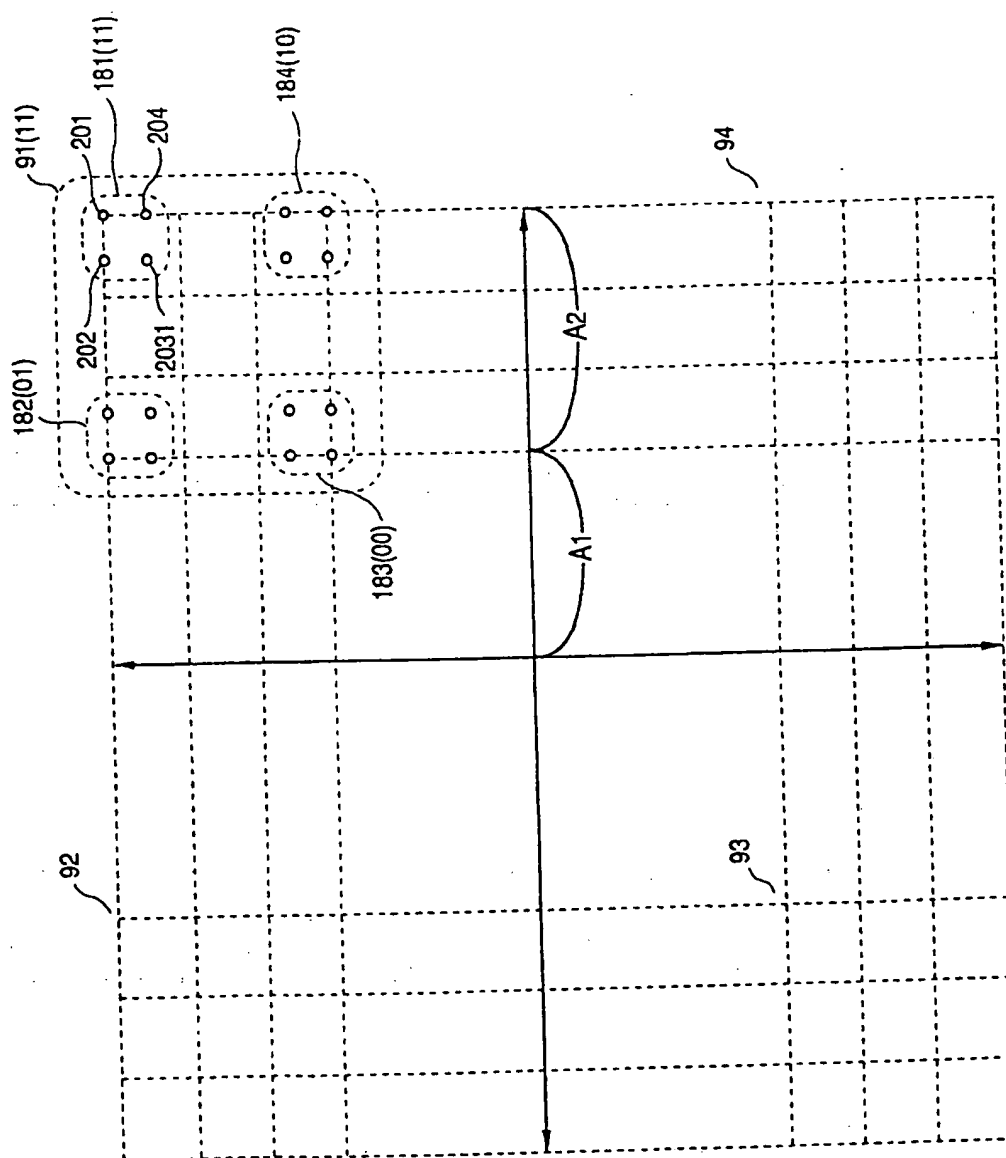


Figure 1 is a schematic diagram of a crystal lattice structure in the A_1 - A_2 vs B_1 - B_2 plane. The diagram shows a grid of points representing lattice sites, with labels for various points and their corresponding Miller indices. The horizontal axis is labeled A_1 and A_2 , and the vertical axis is labeled B_1 and B_2 . The lattice is divided into regions by dashed lines, with labels 181, 182, 183, and 184 indicating different parts of the structure. The diagram also shows the dimensions $\frac{A_2}{6}$, $\frac{2}{3} A_2$, and $\frac{A_2}{6}$, and $\frac{B_2}{6}$, $\frac{B_2}{6}$, and $\frac{B_2}{6}$.

FIG. 16

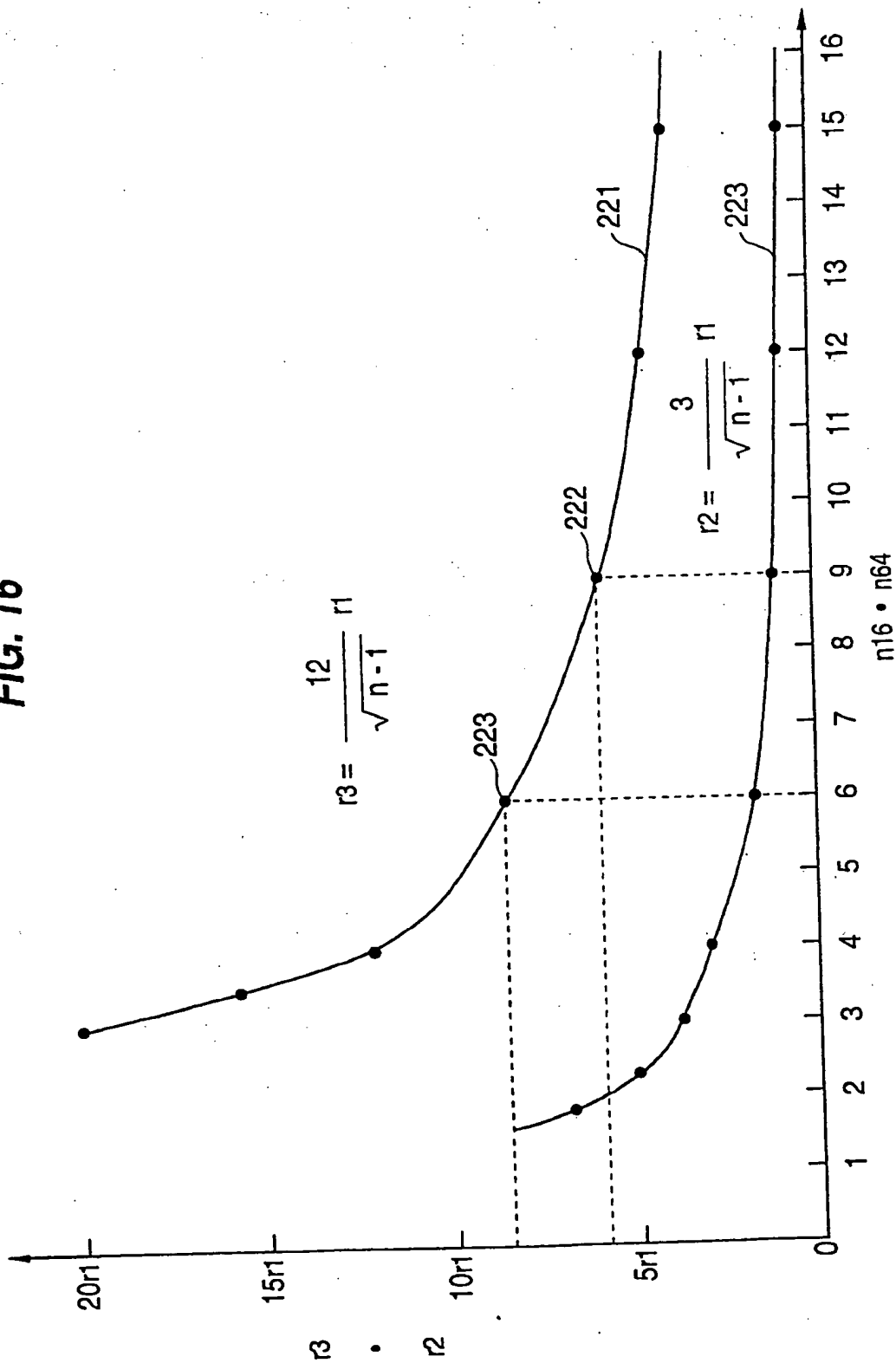


FIG. 17

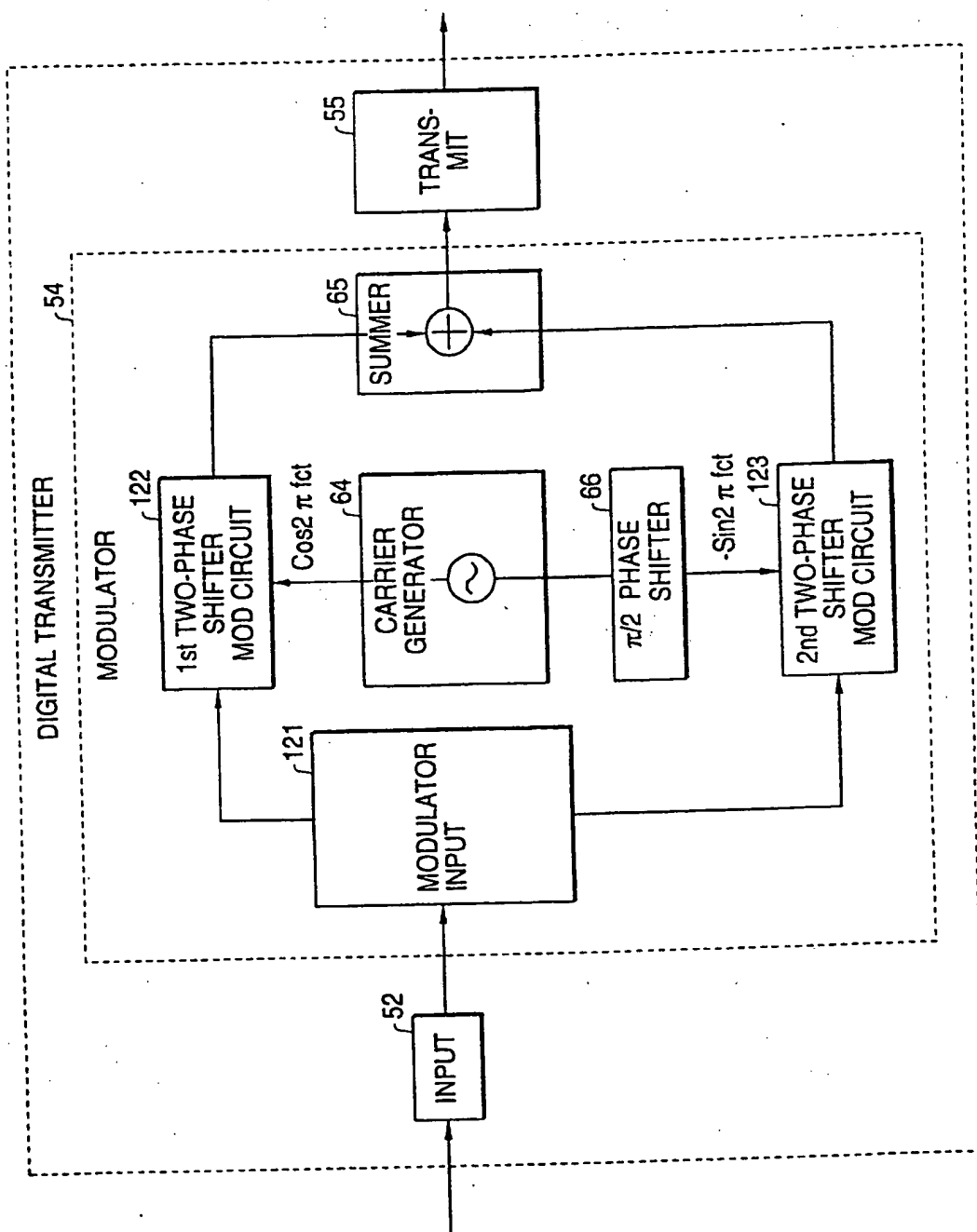


FIG. 18

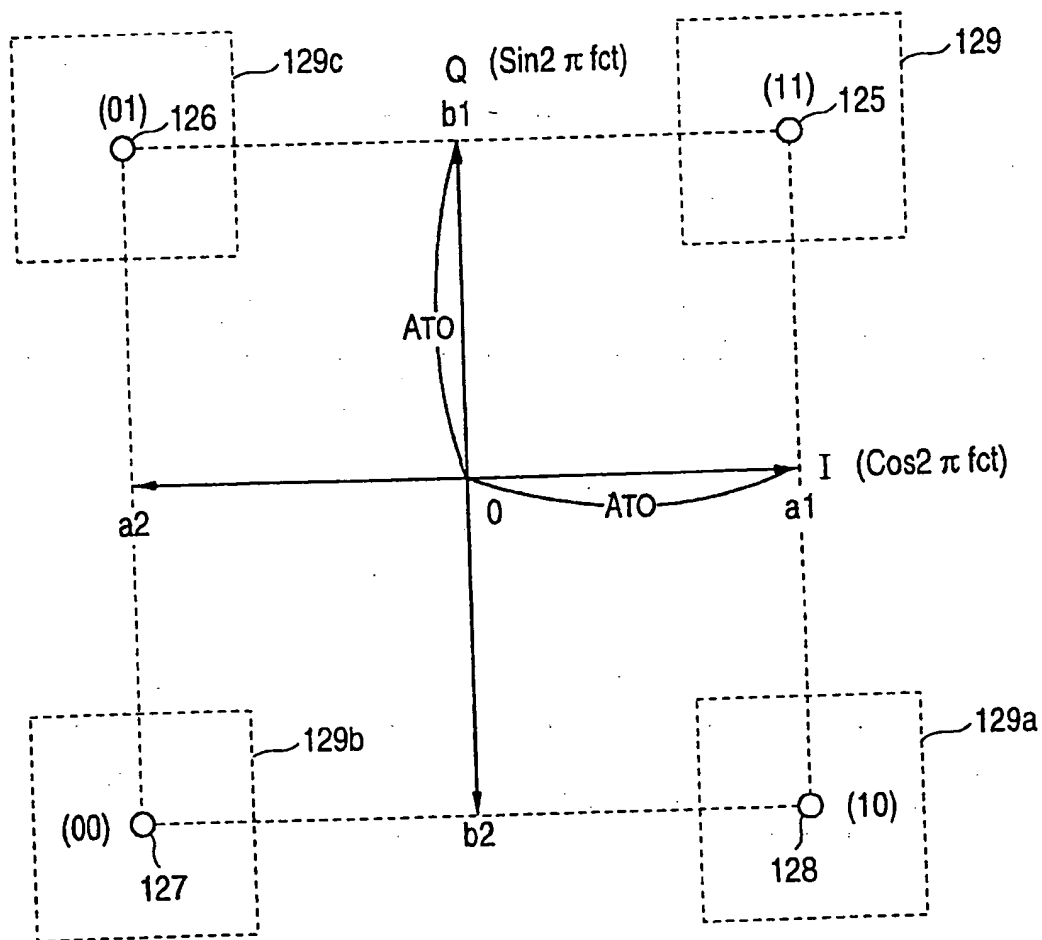


FIG. 19

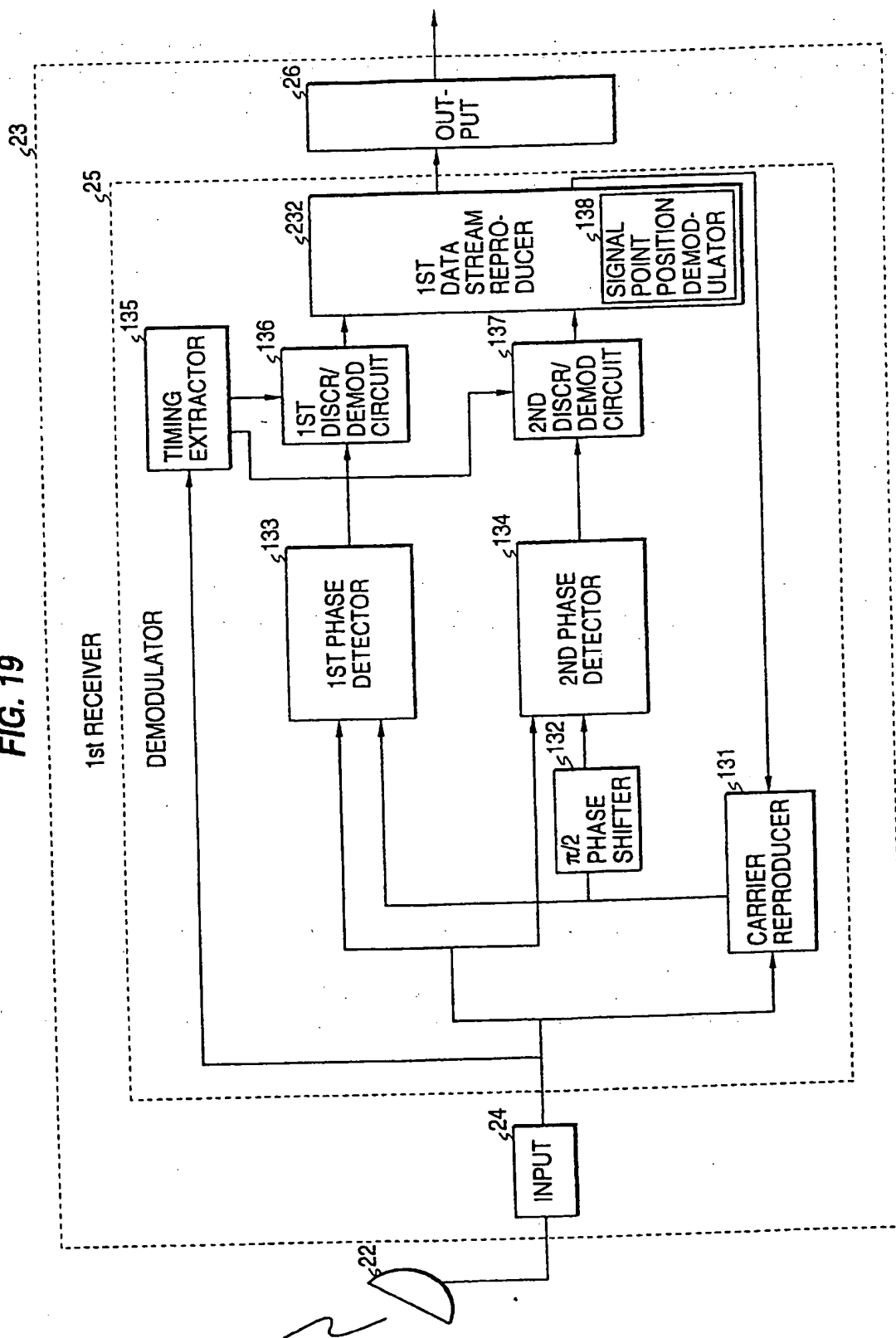


FIG. 20

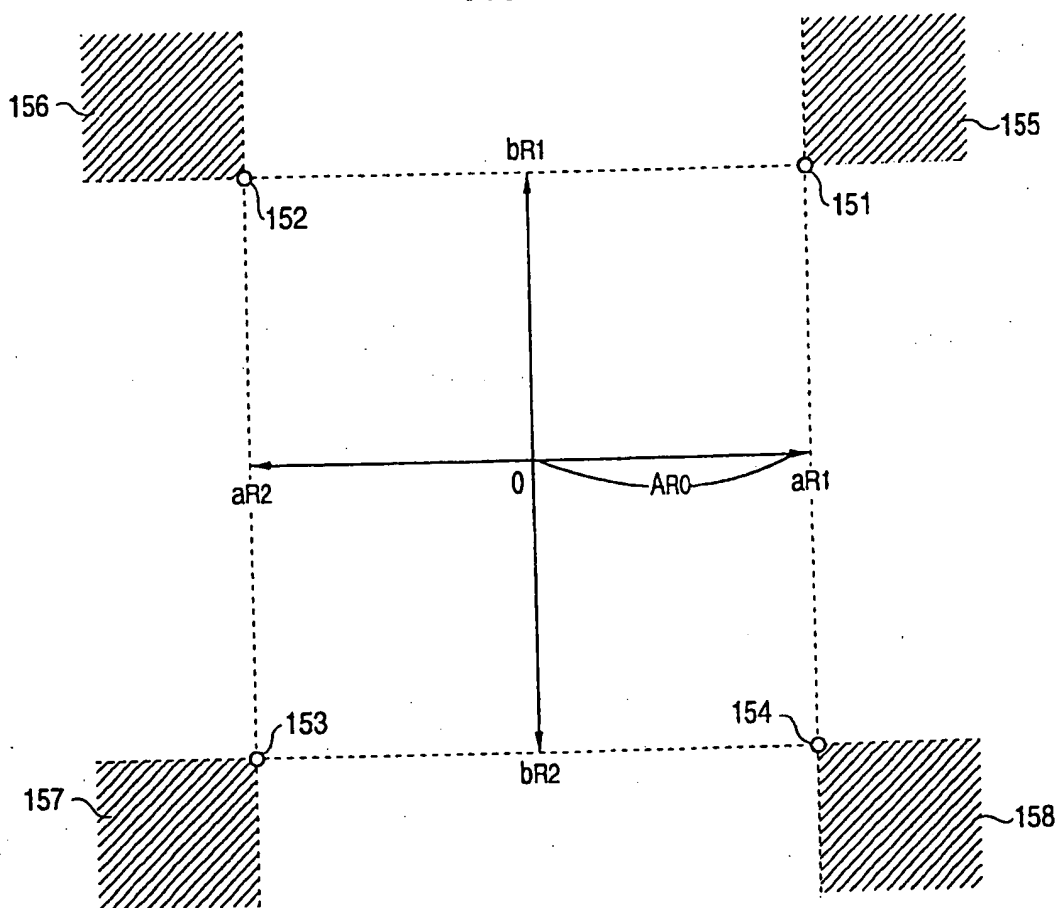


FIG. 21

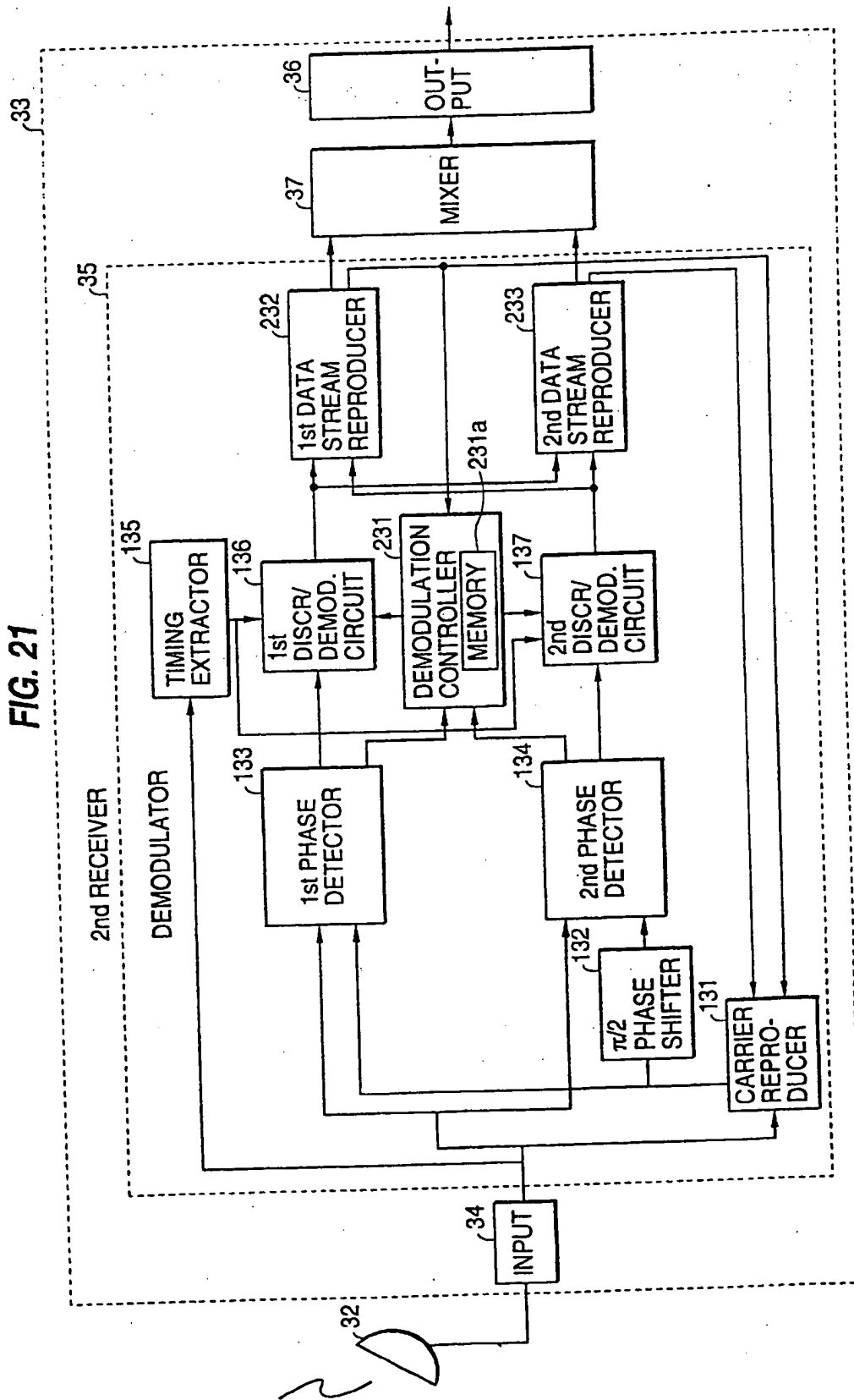


FIG. 22

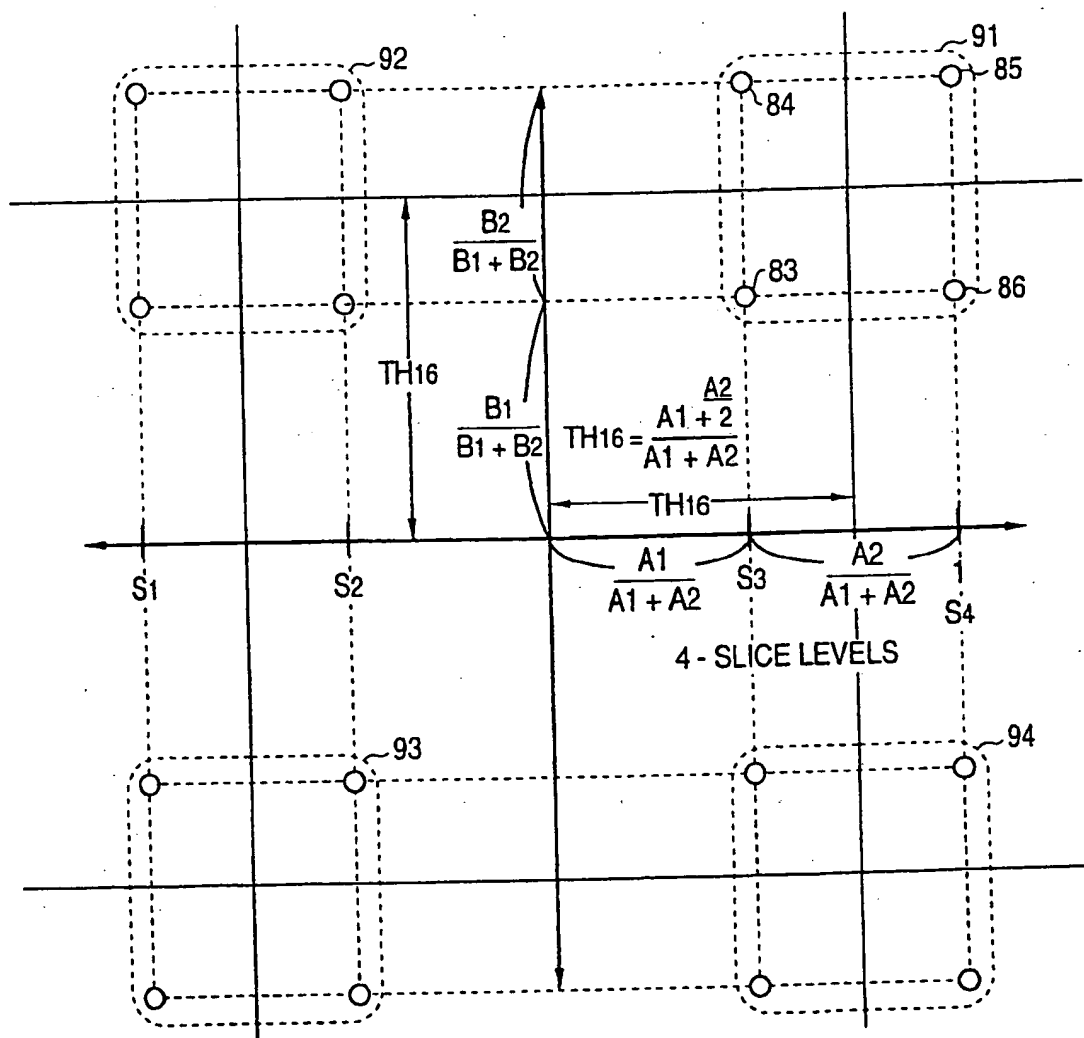


FIG. 23

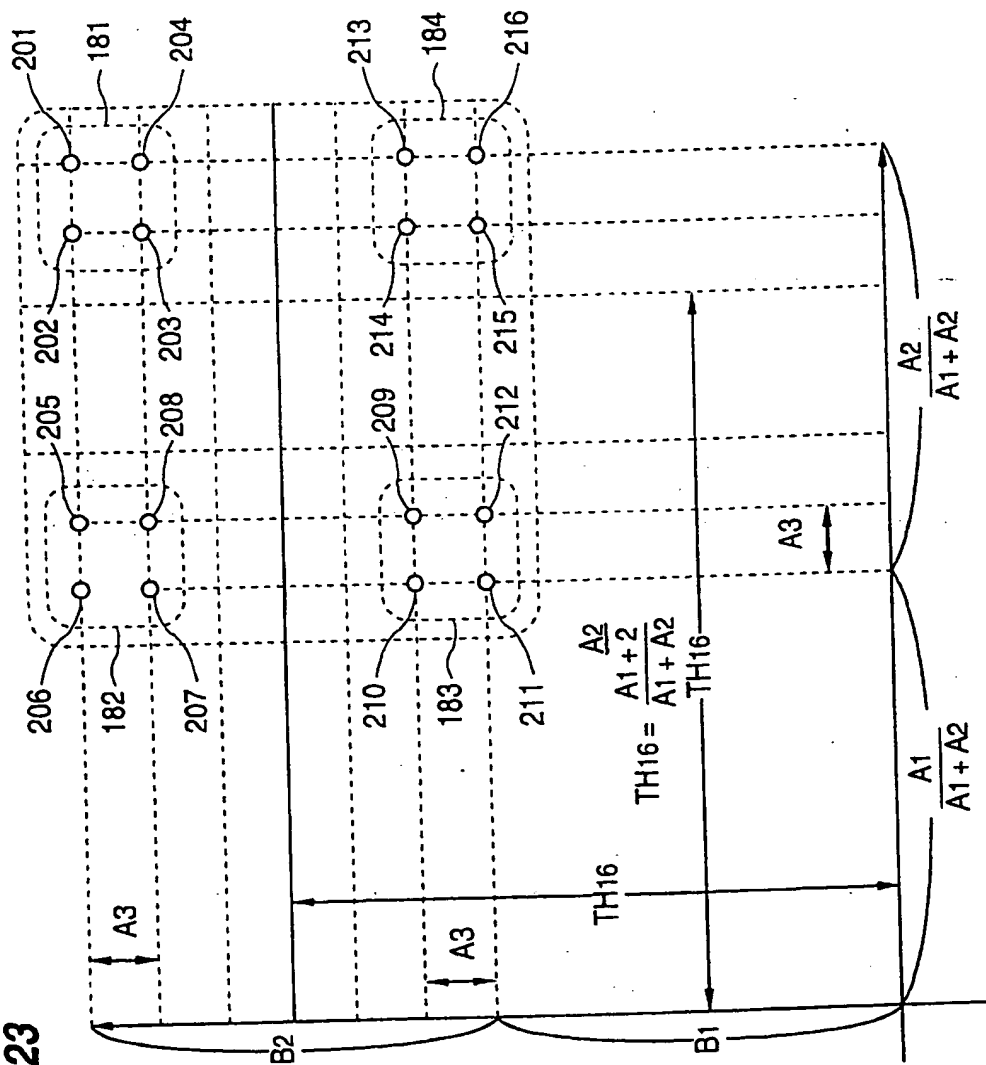


FIG. 24

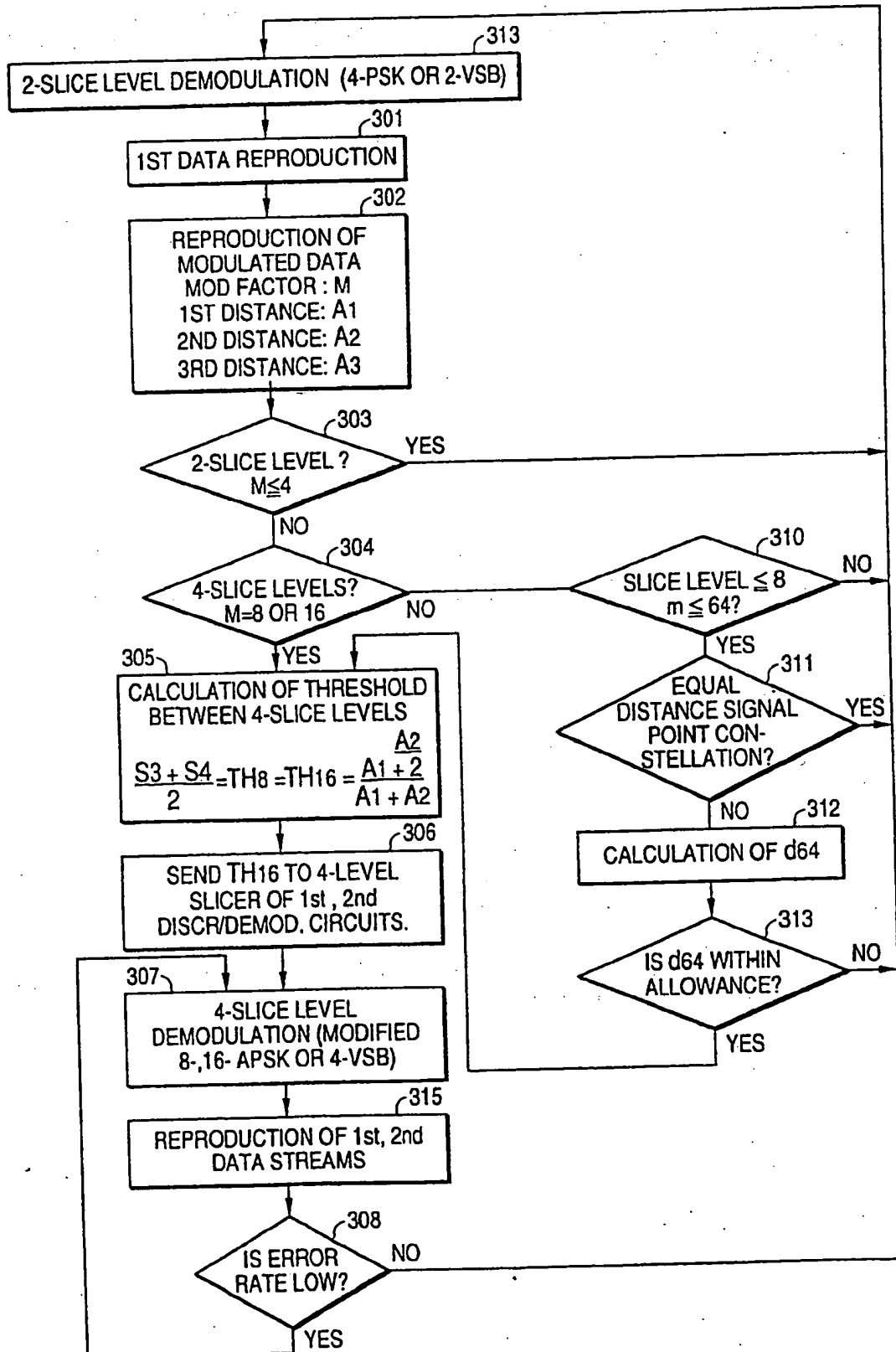


FIG. 25(a)

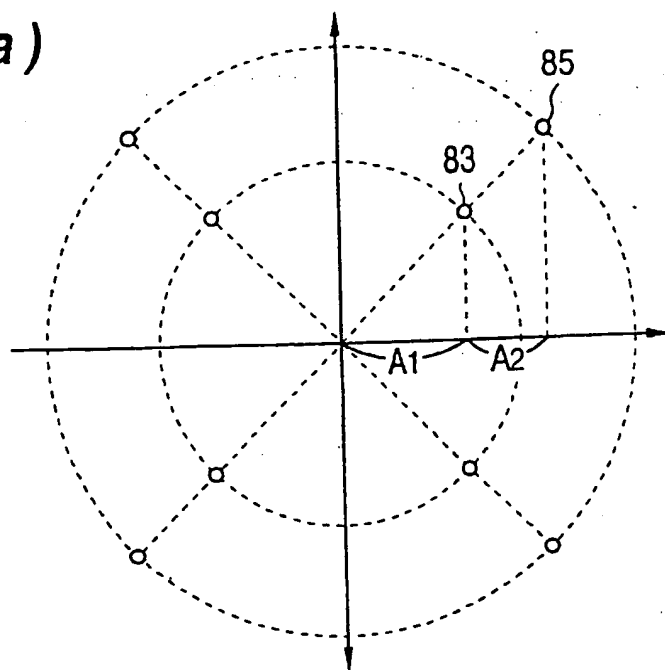


FIG. 25(b)

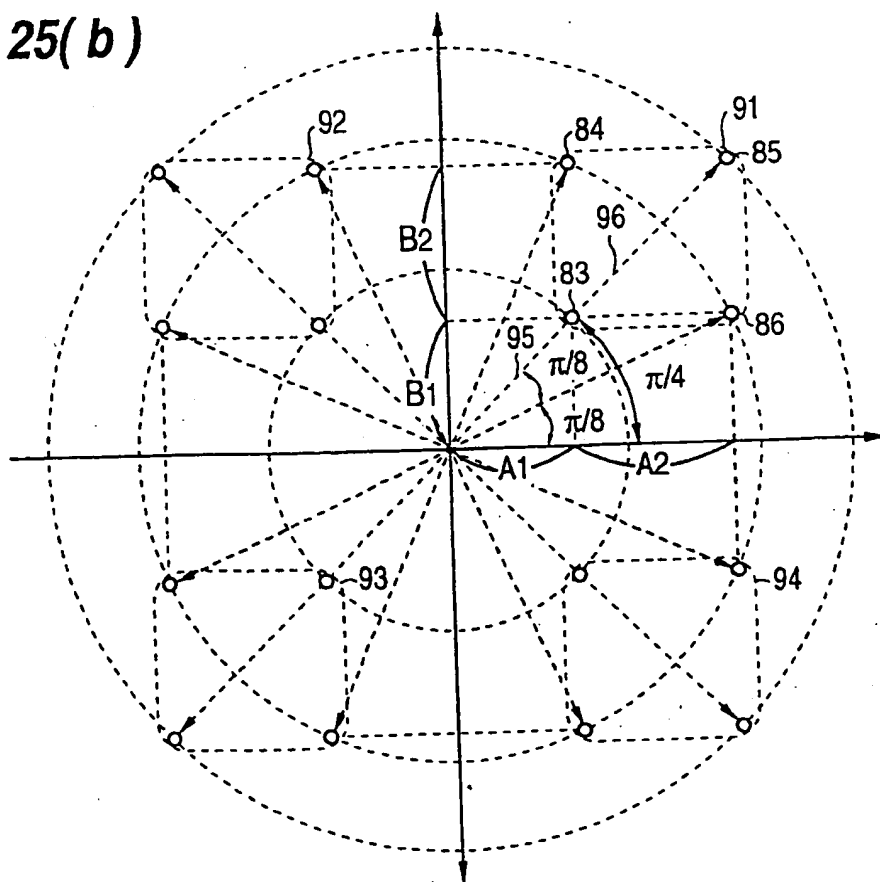
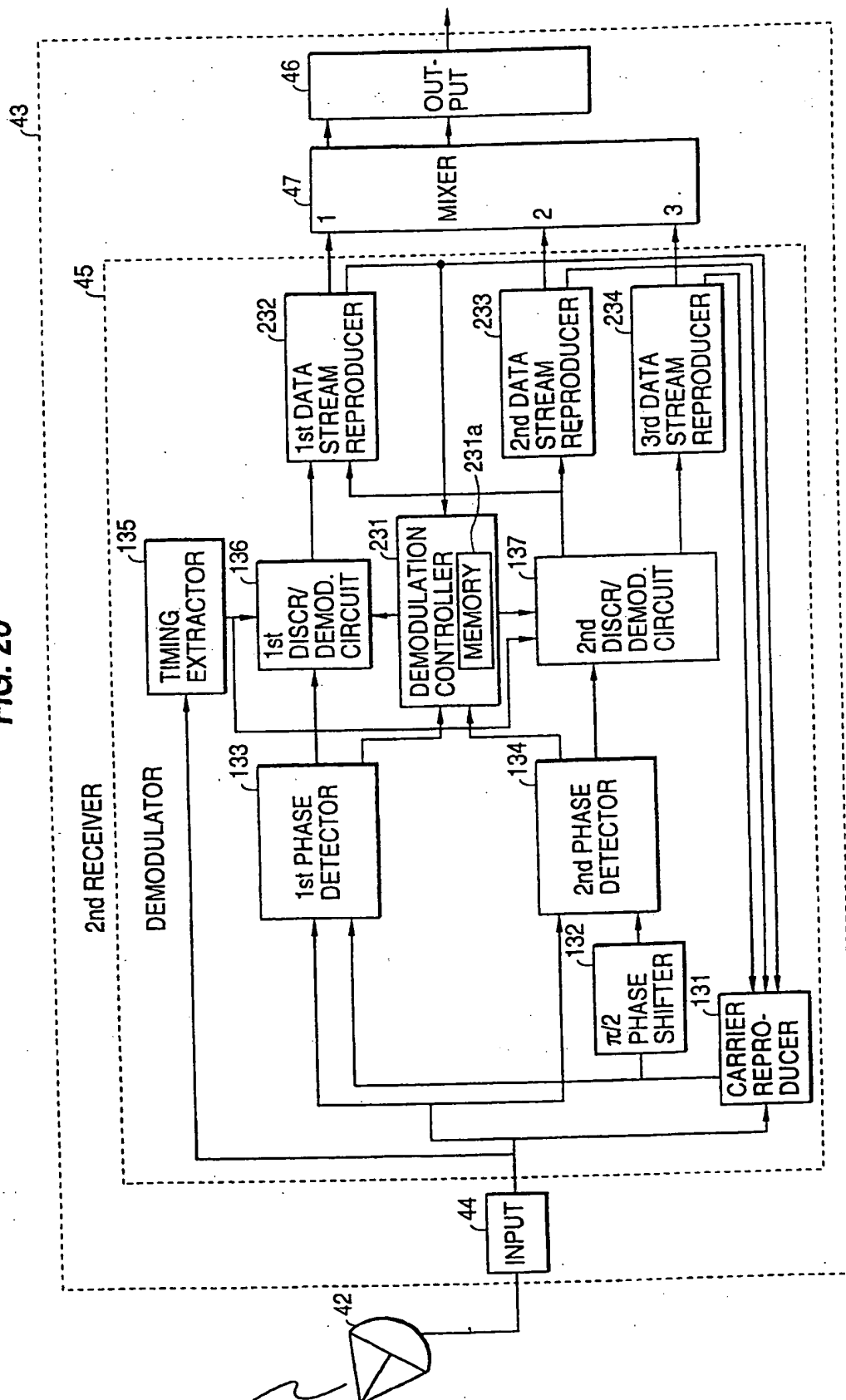


FIG. 26



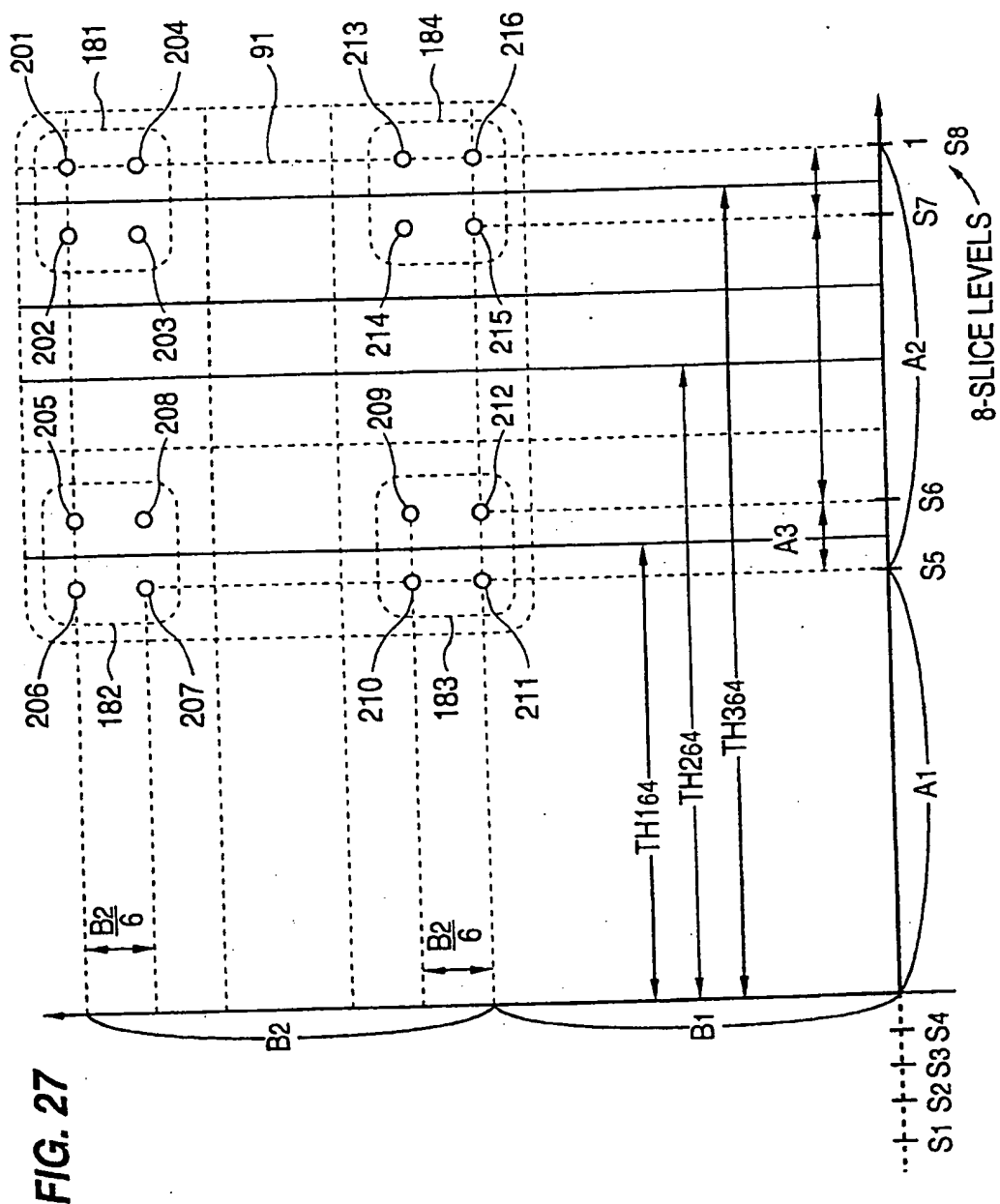


FIG. 28

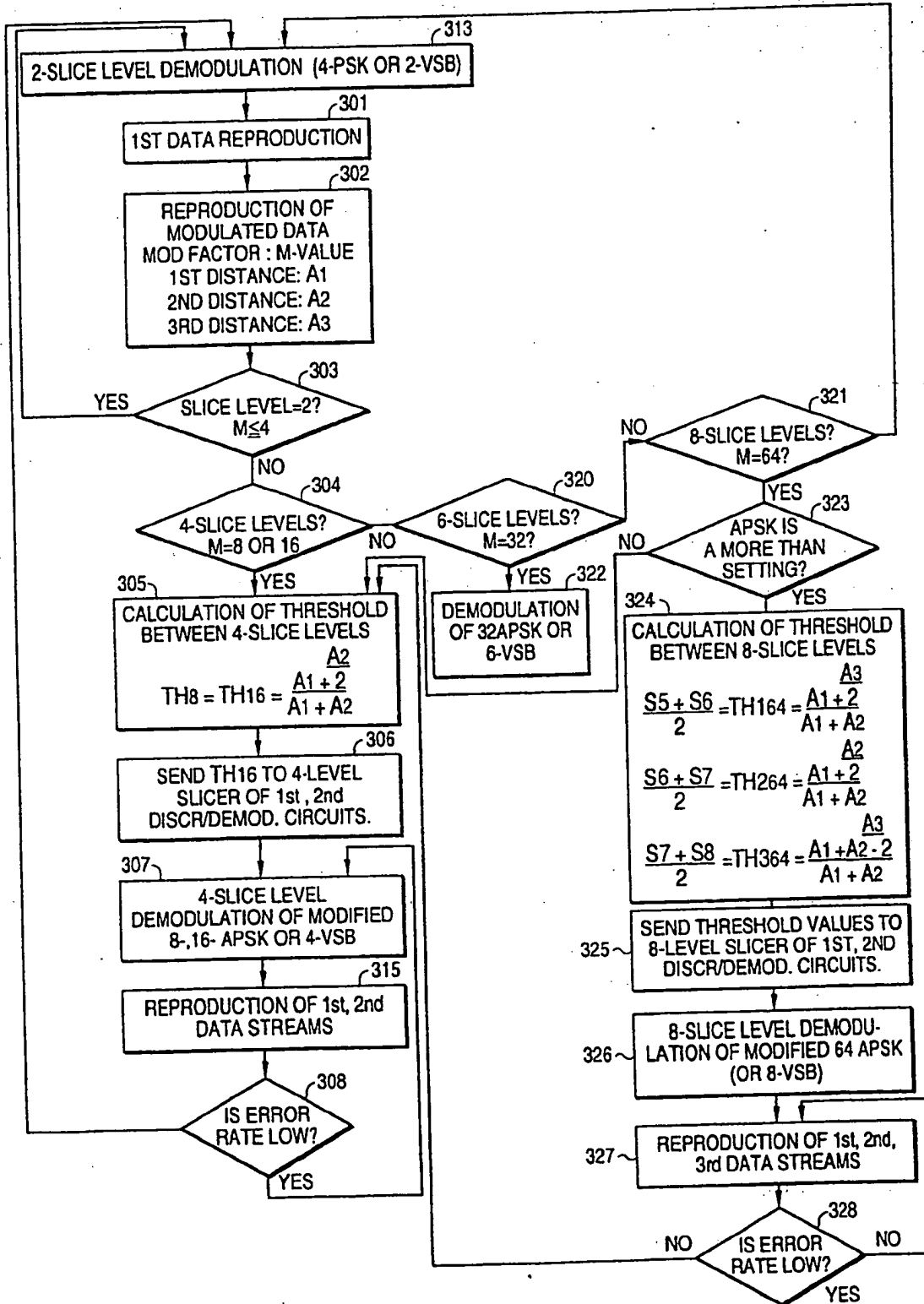


FIG. 29

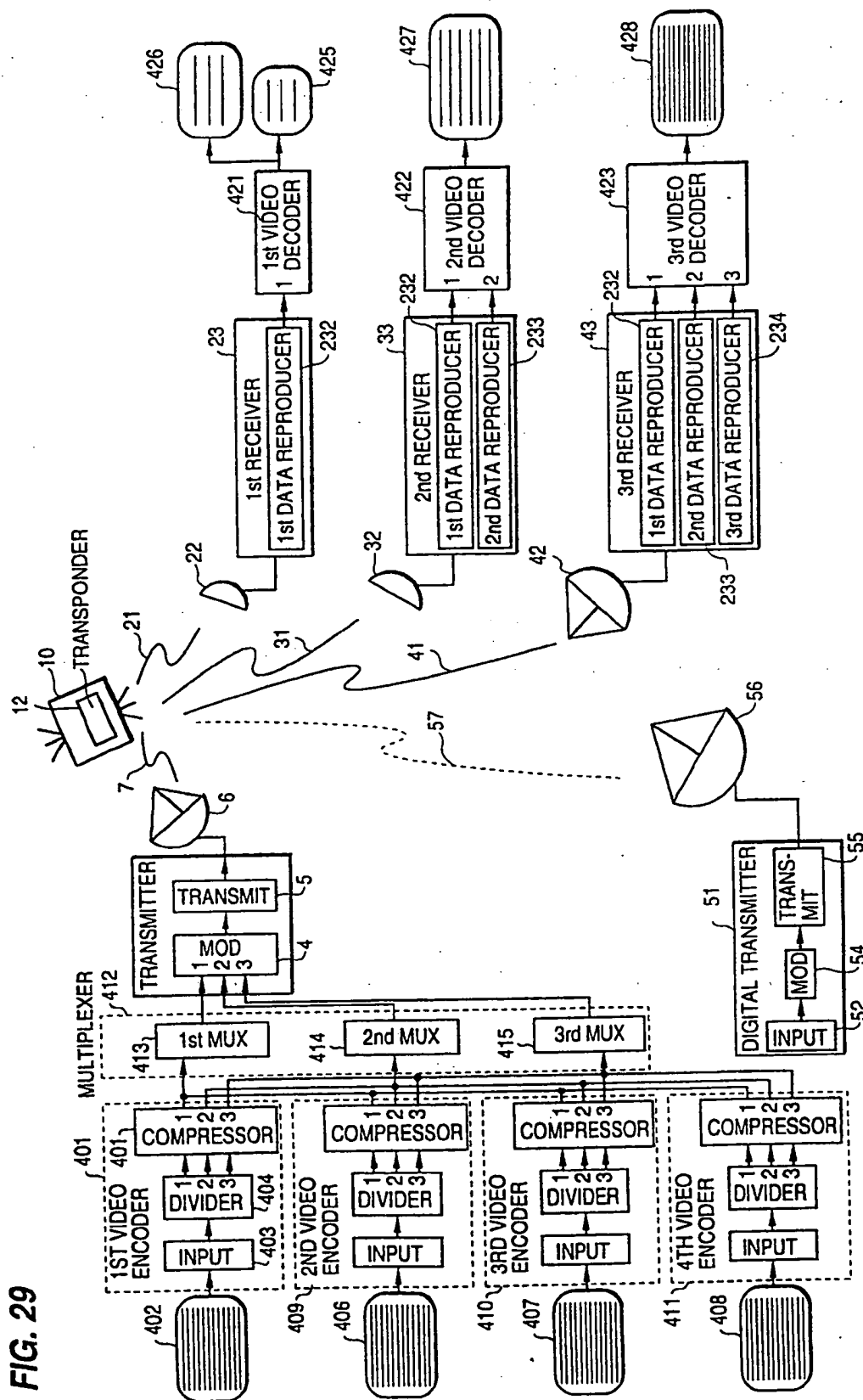
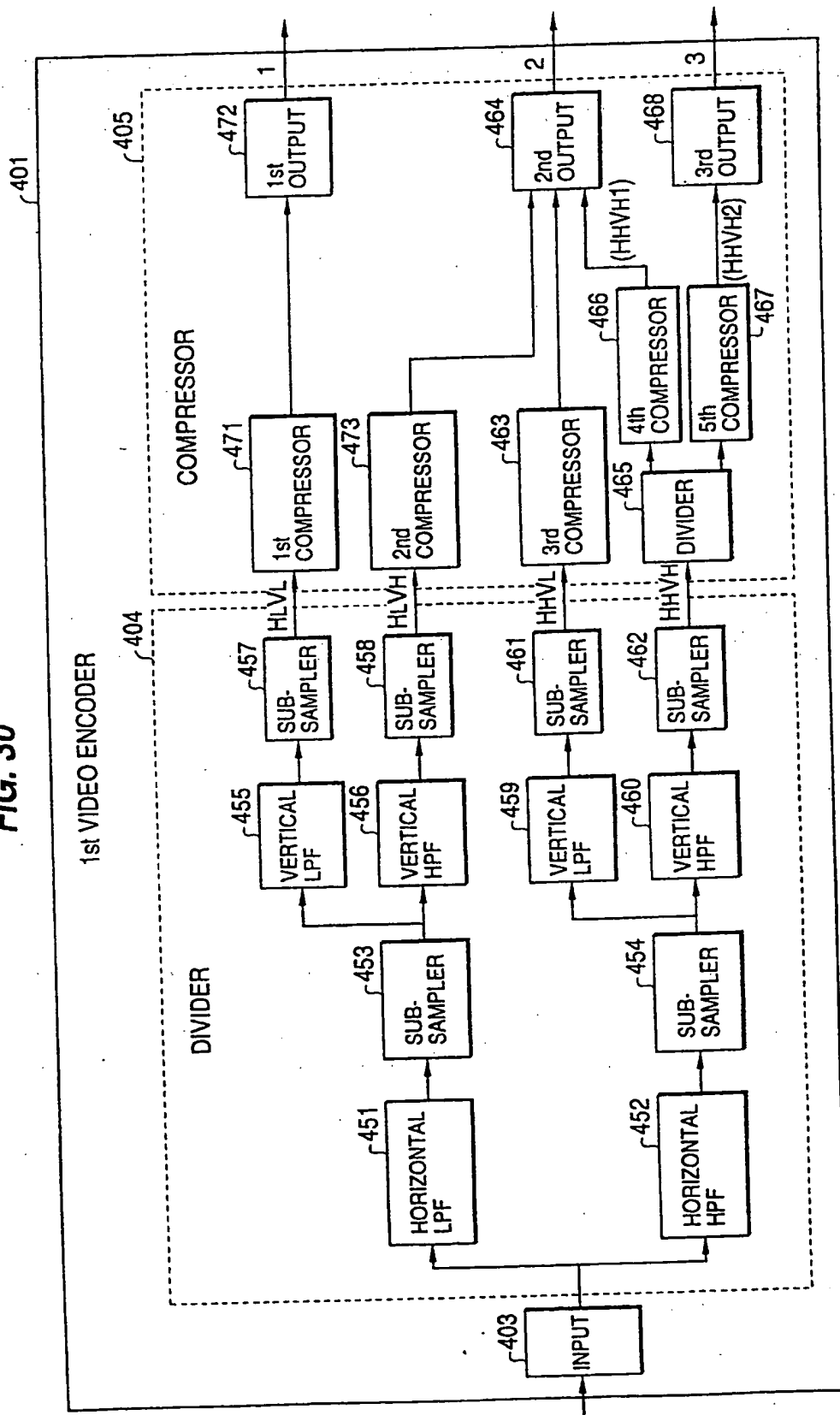


FIG. 30



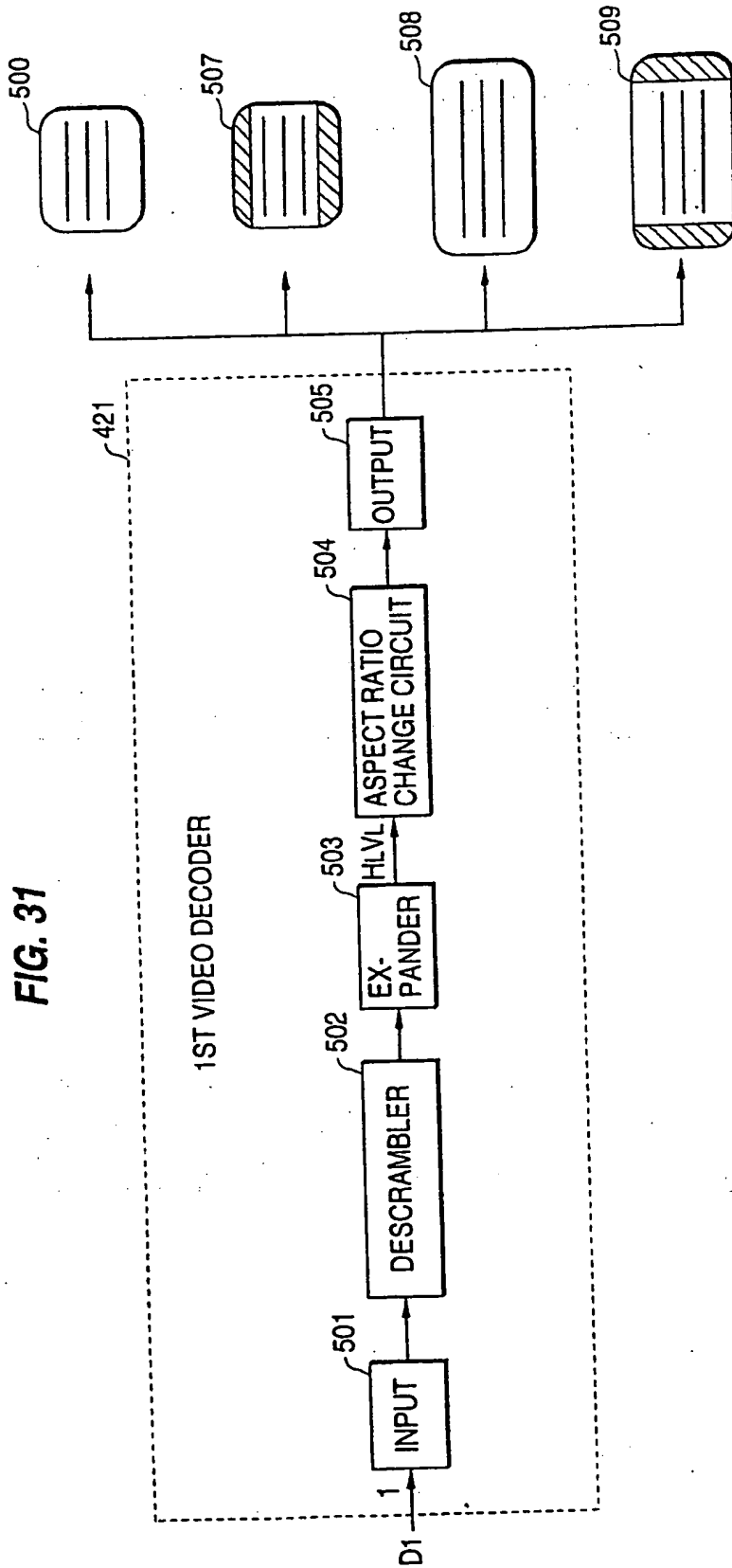


FIG. 32

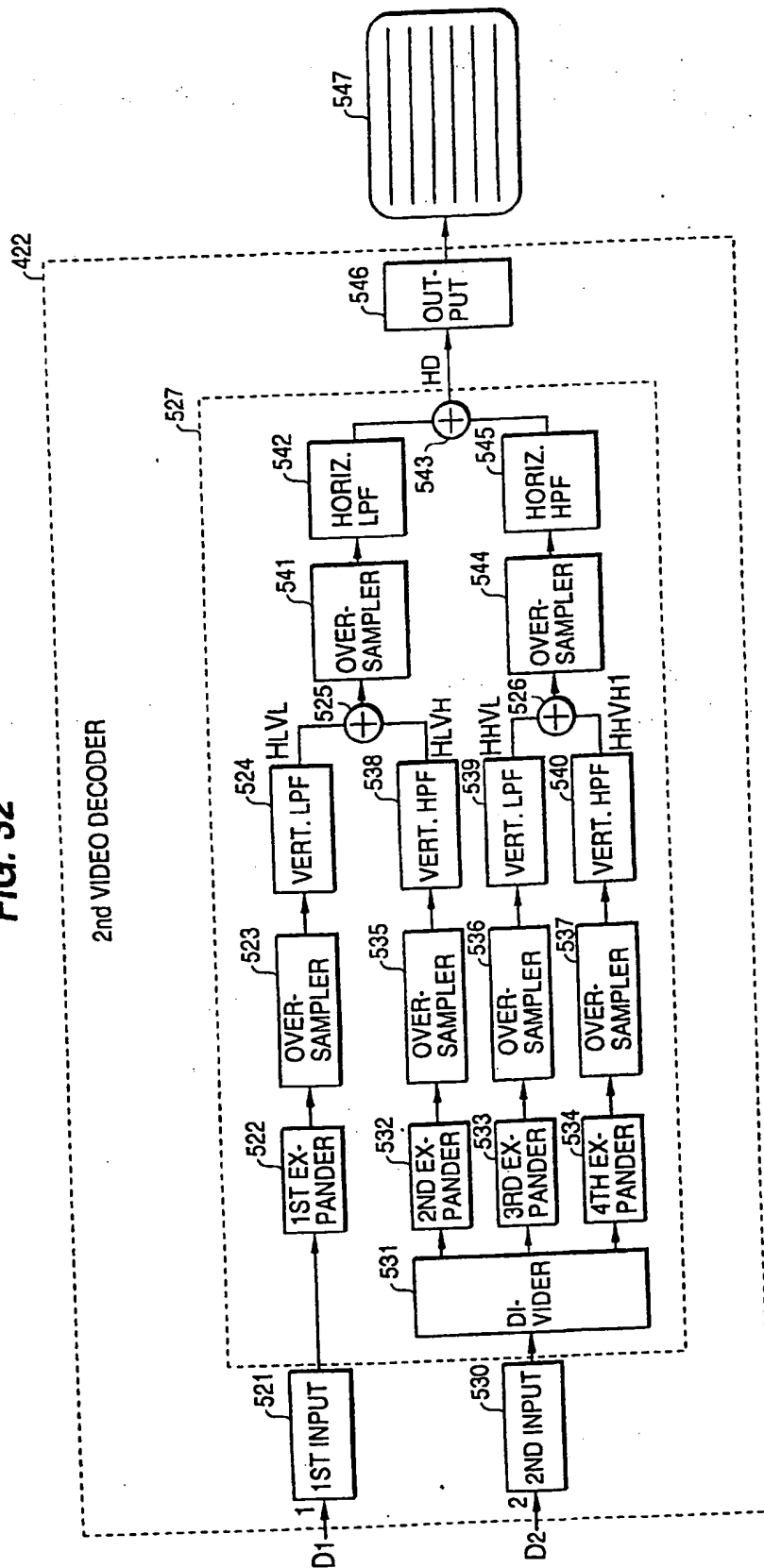


FIG. 33

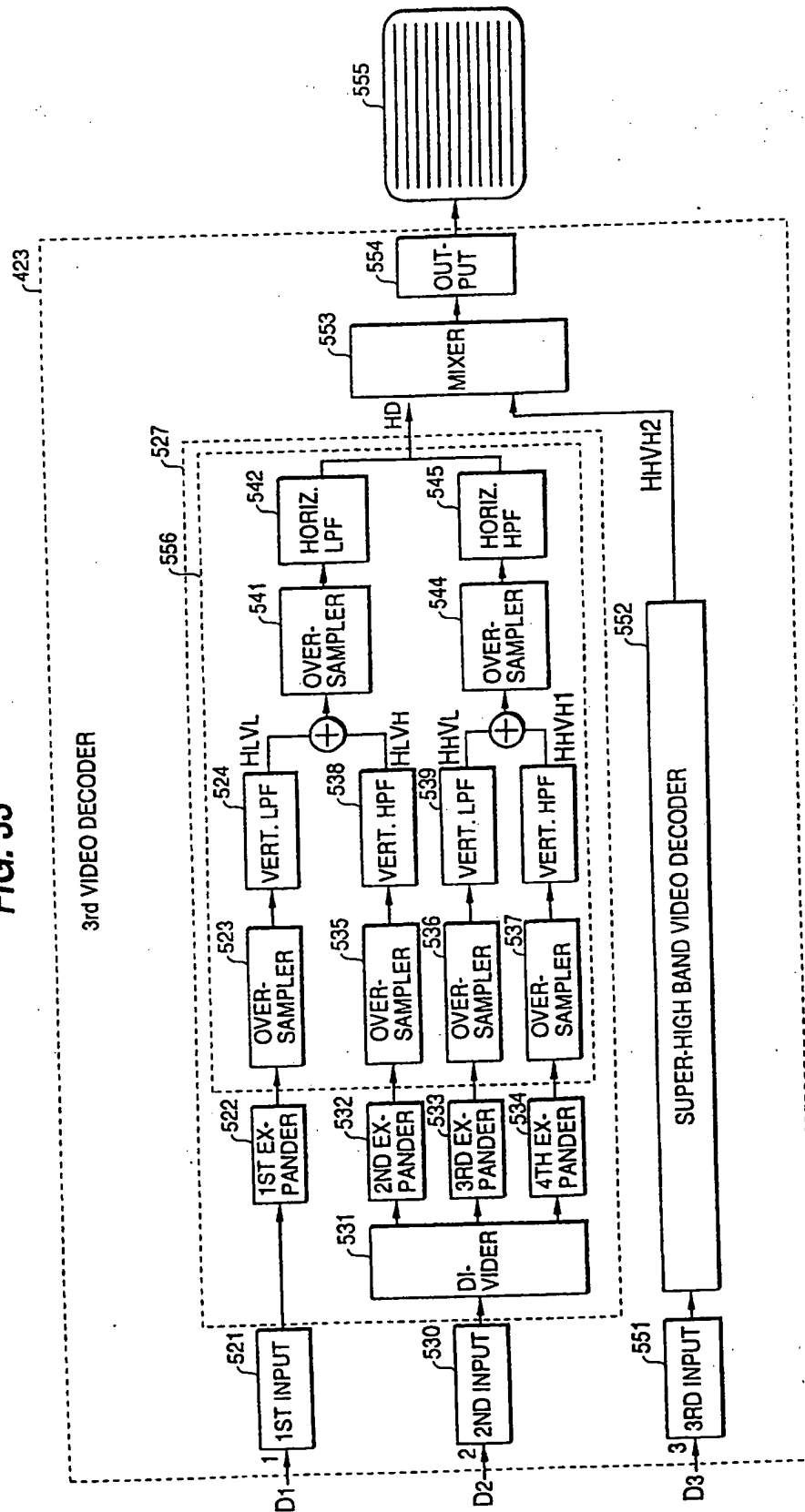


FIG. 34

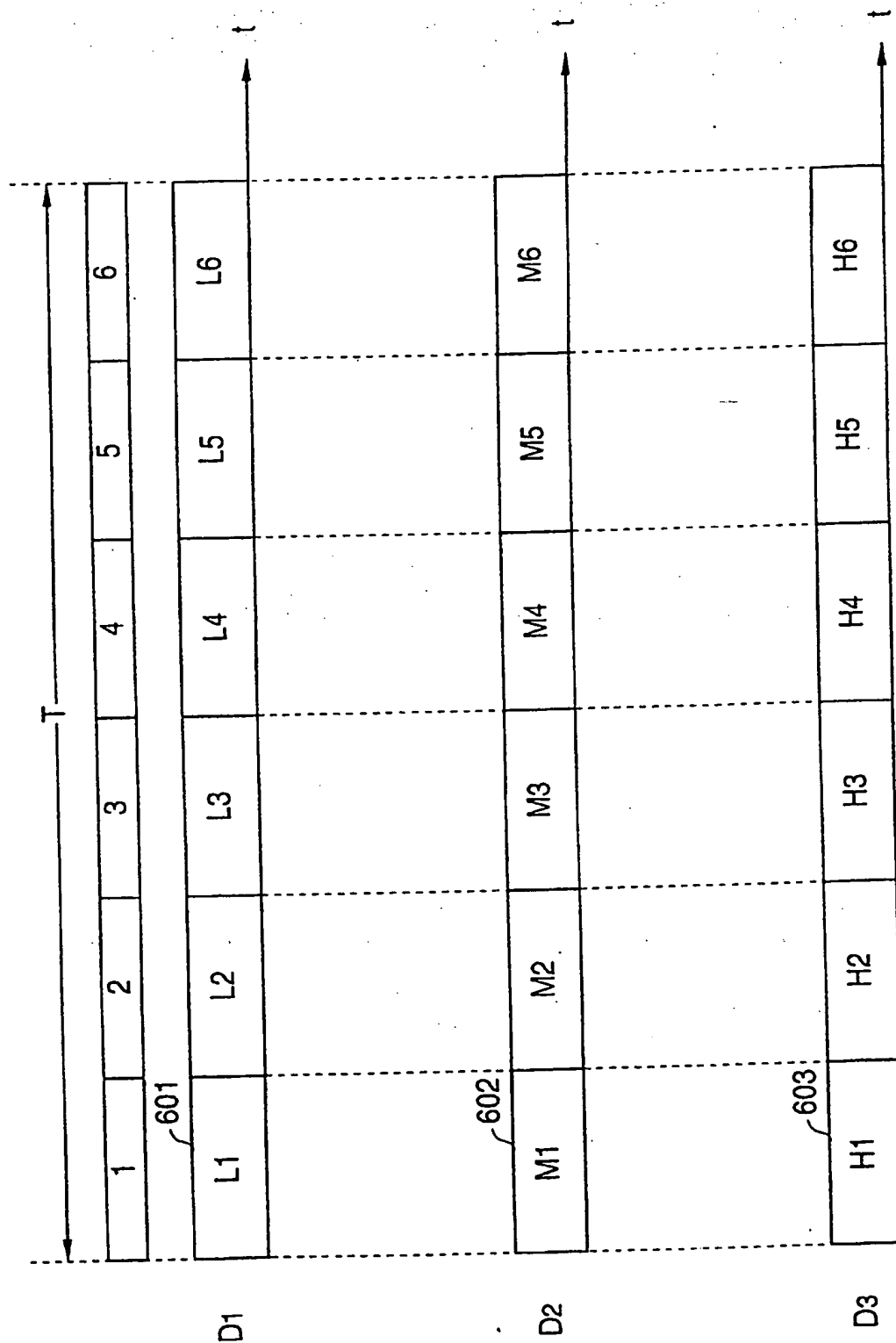


FIG. 35

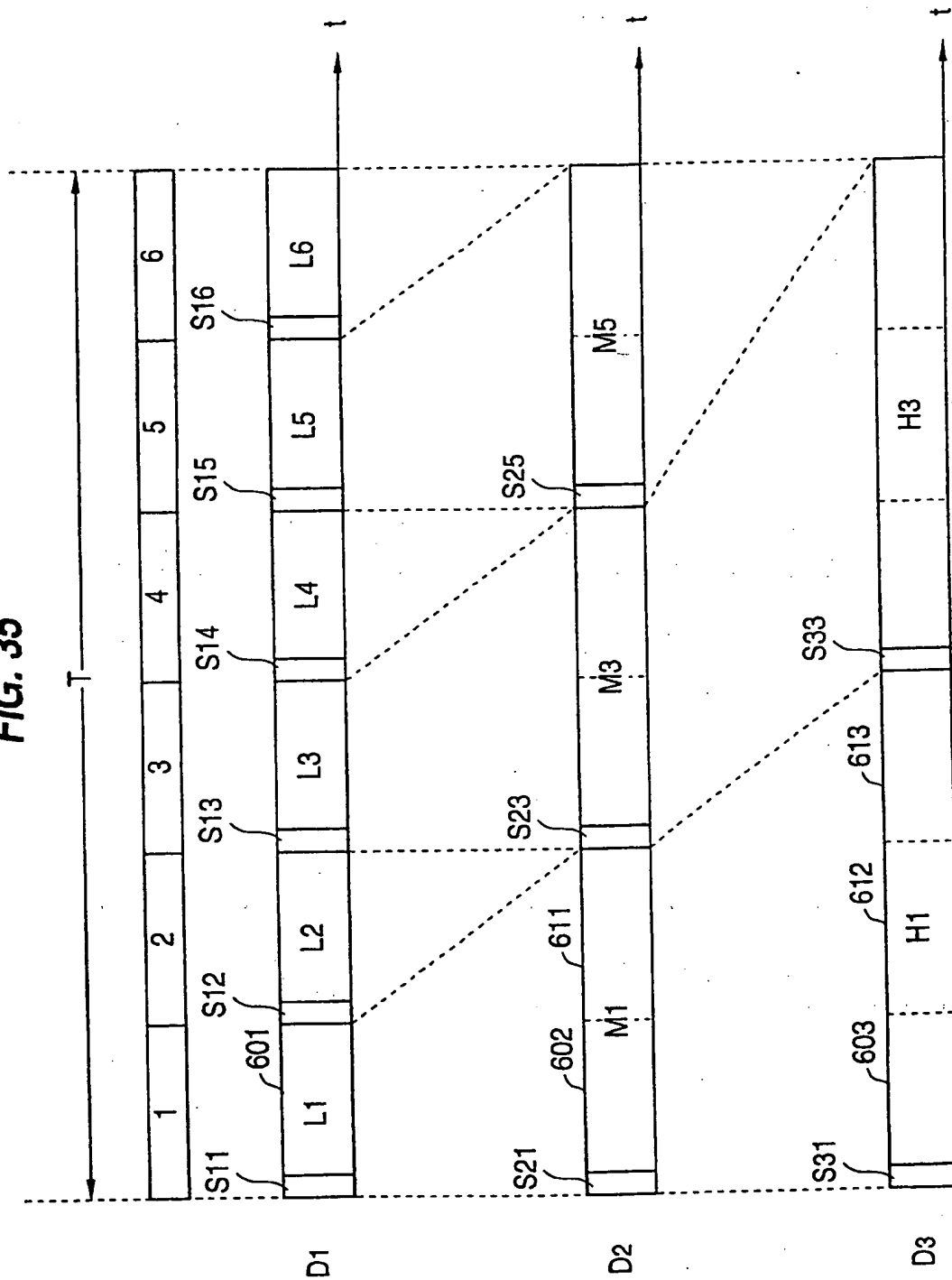


FIG. 36

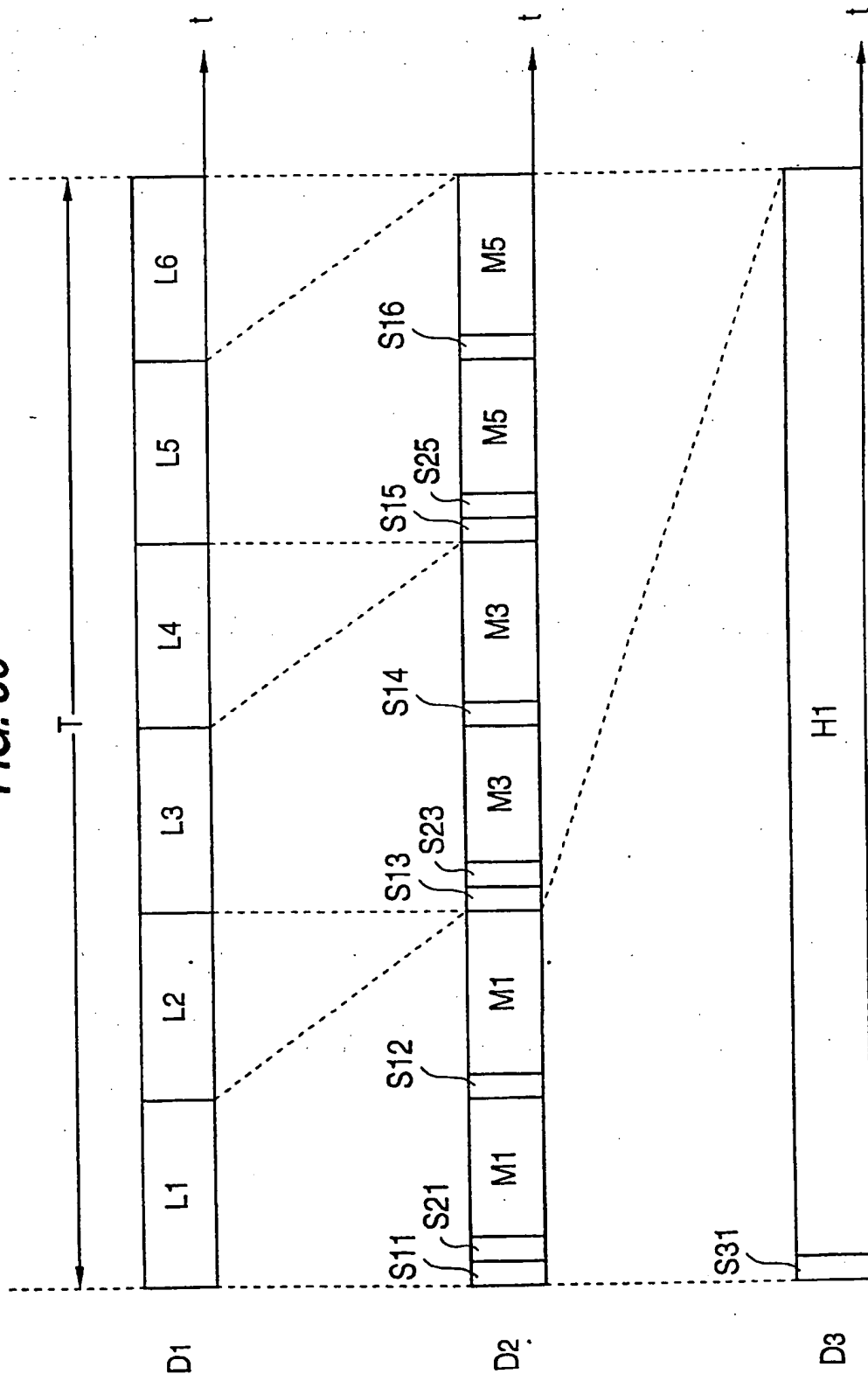


FIG. 37

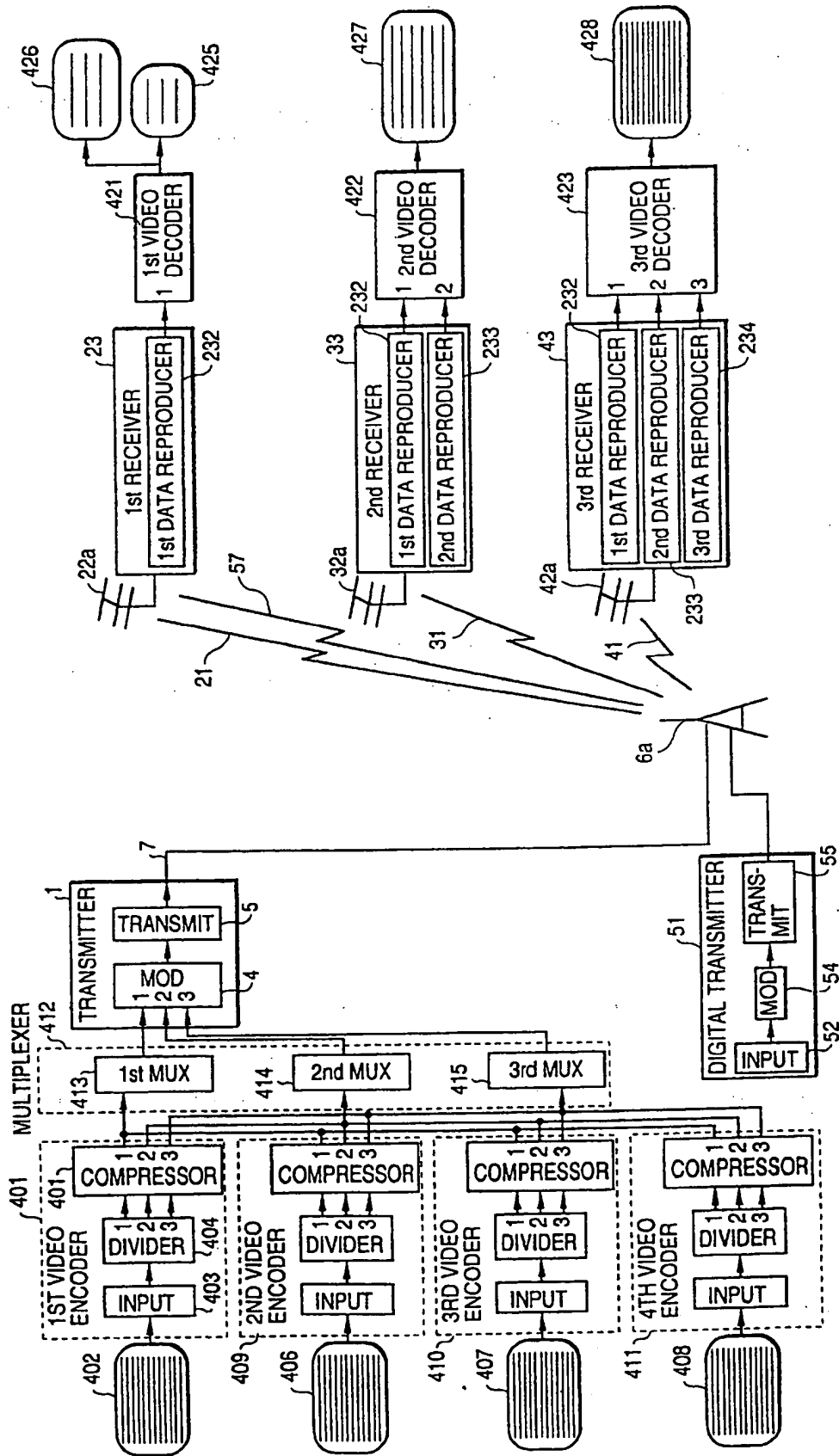


FIG. 38

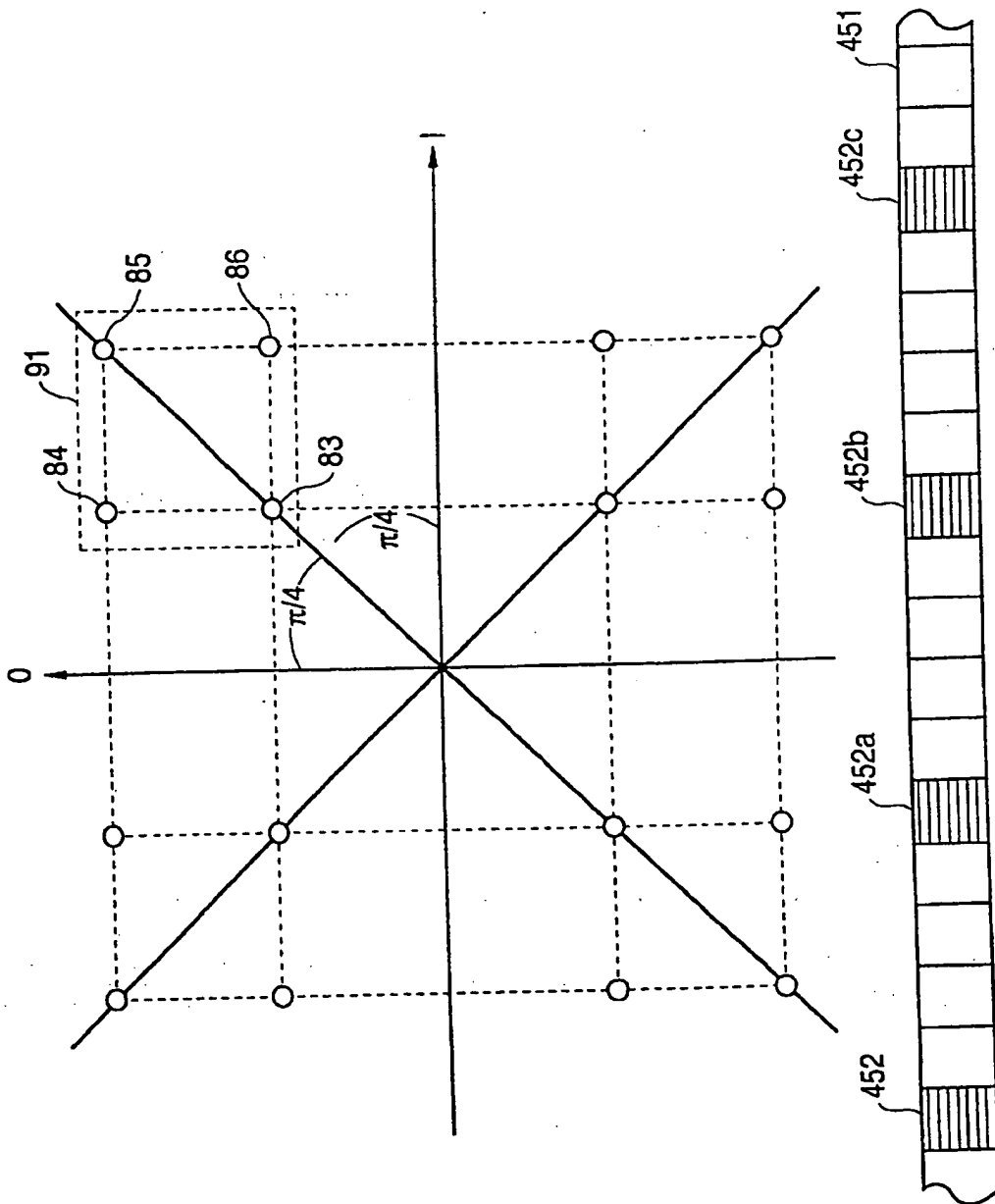


FIG. 39

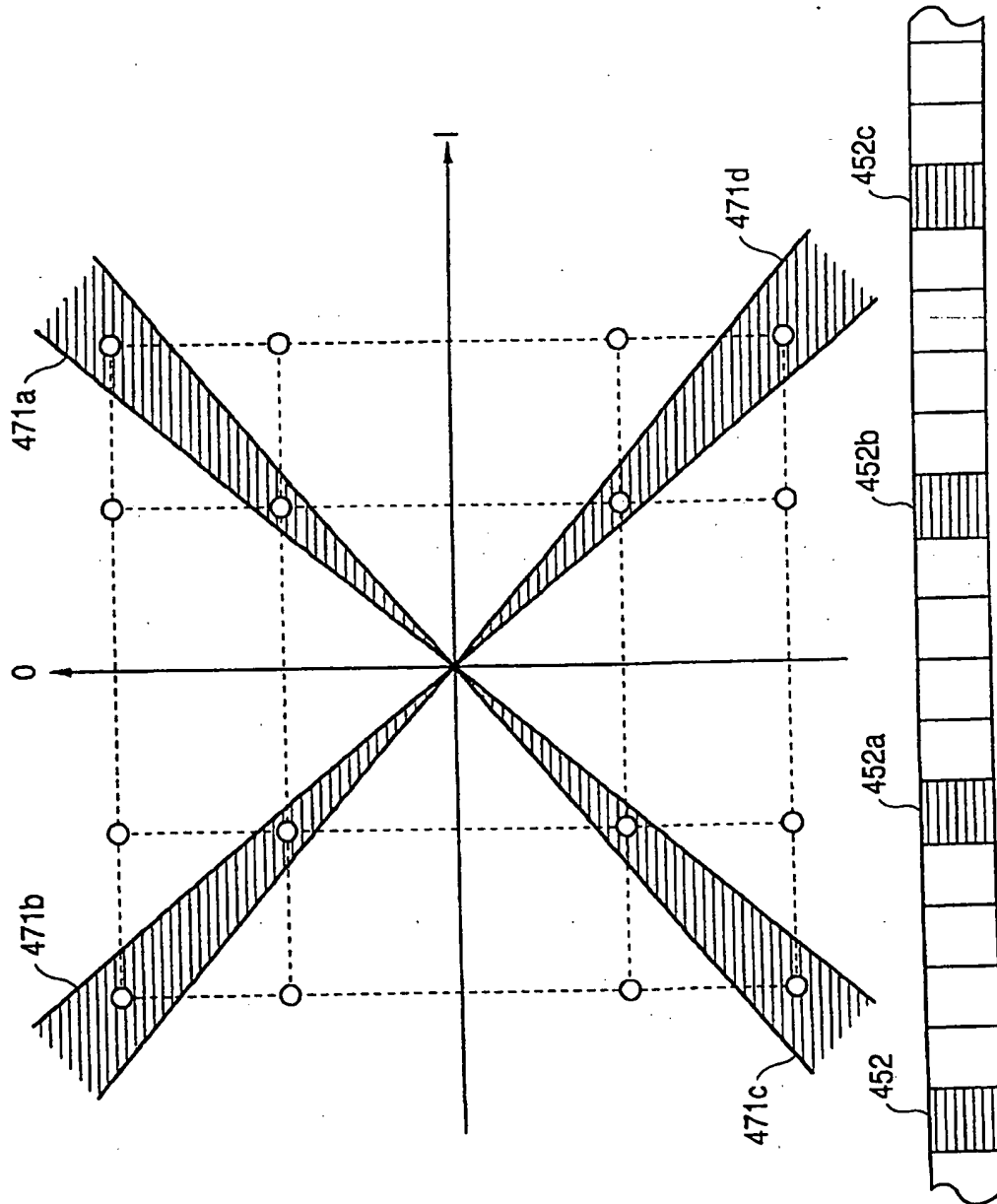


FIG. 40

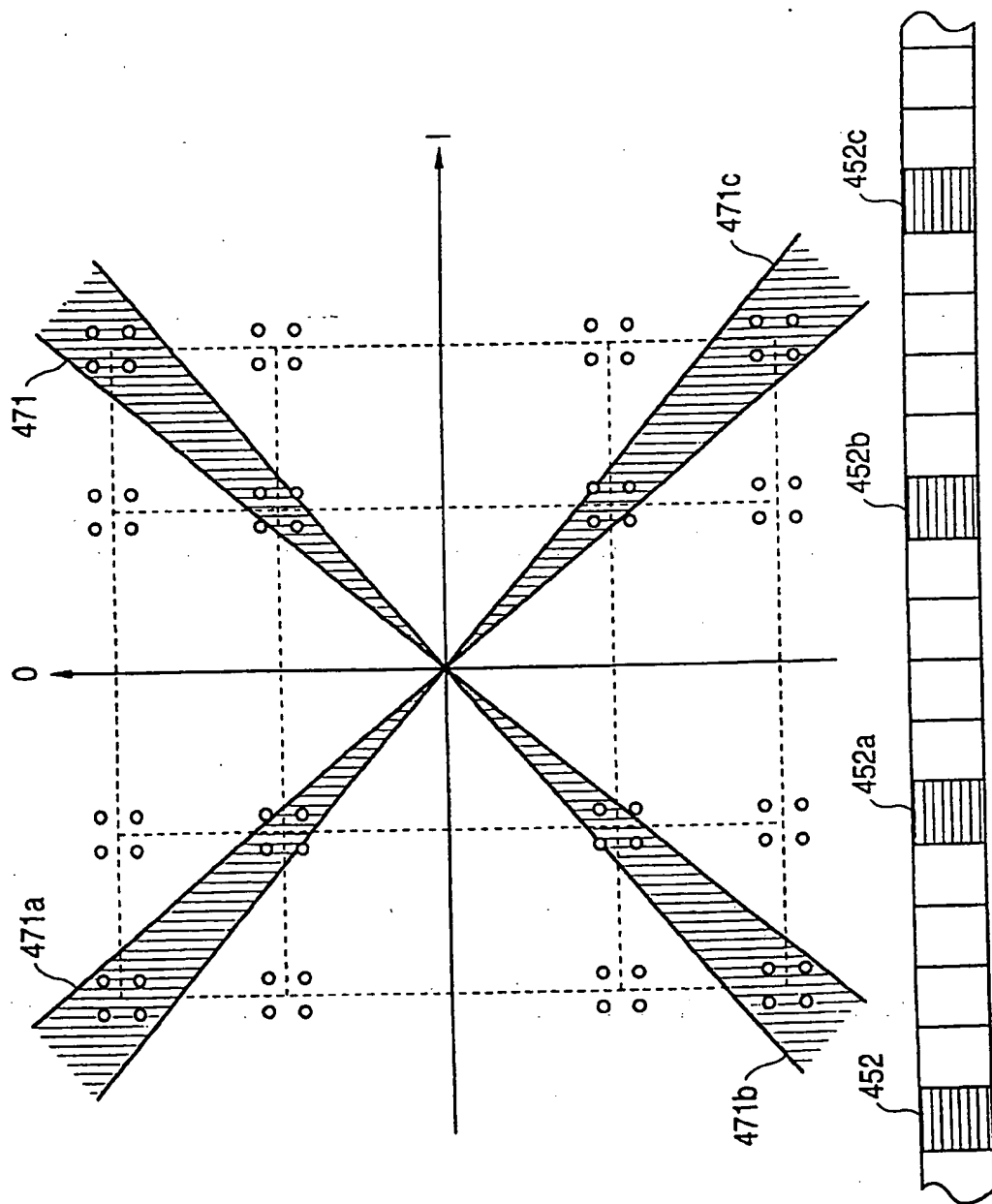


FIG. 42

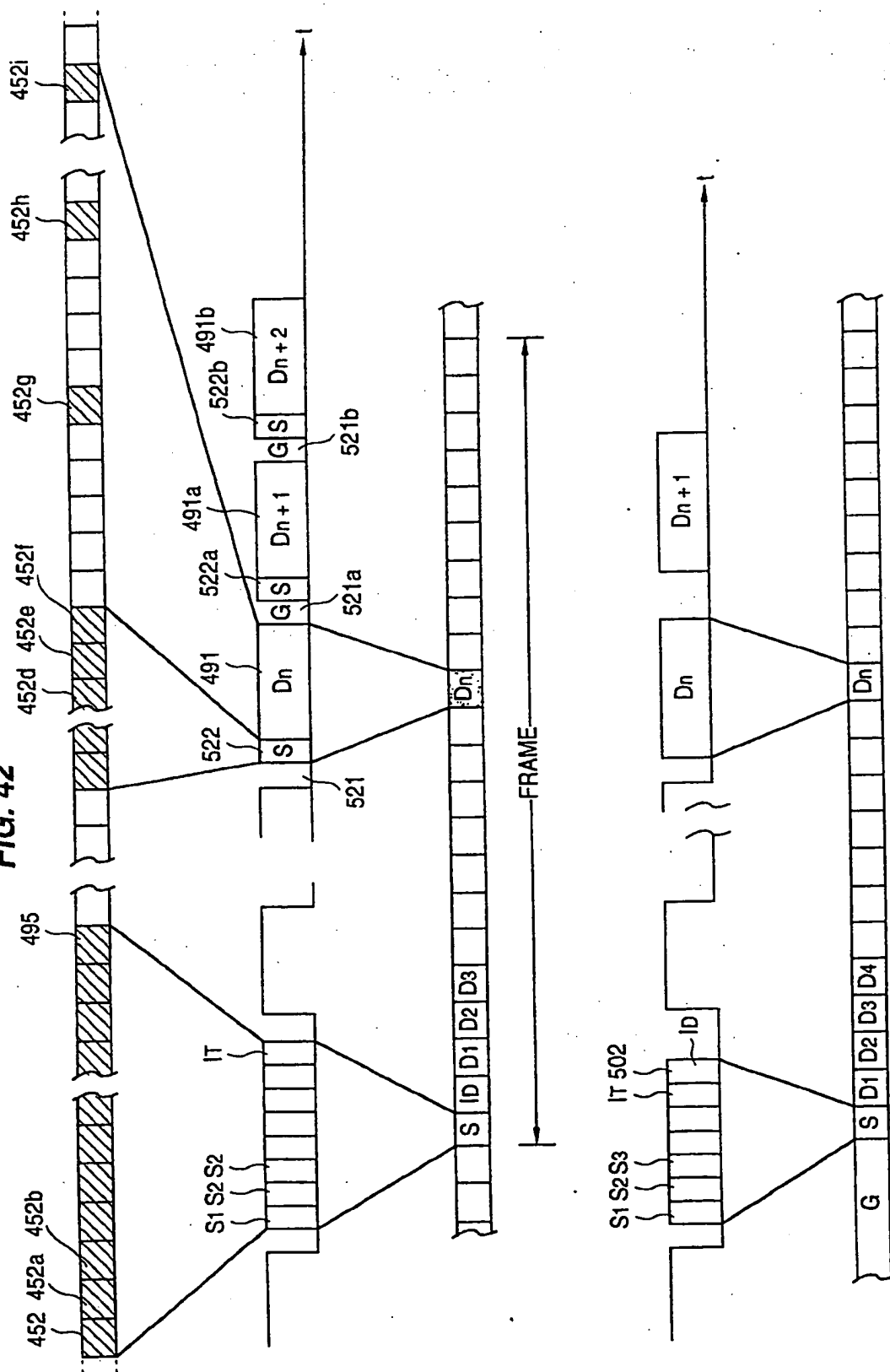


FIG. 43

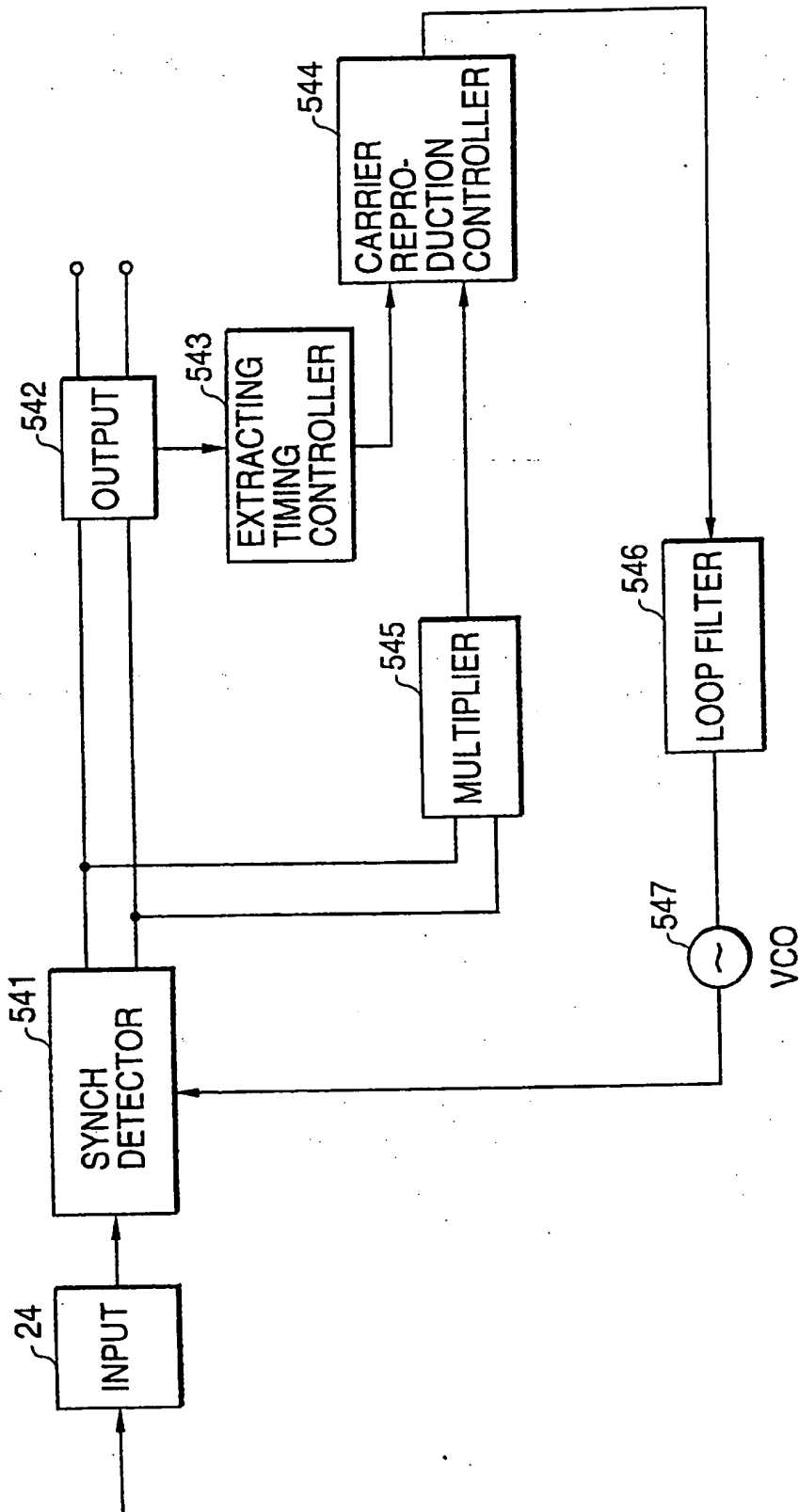


FIG. 44

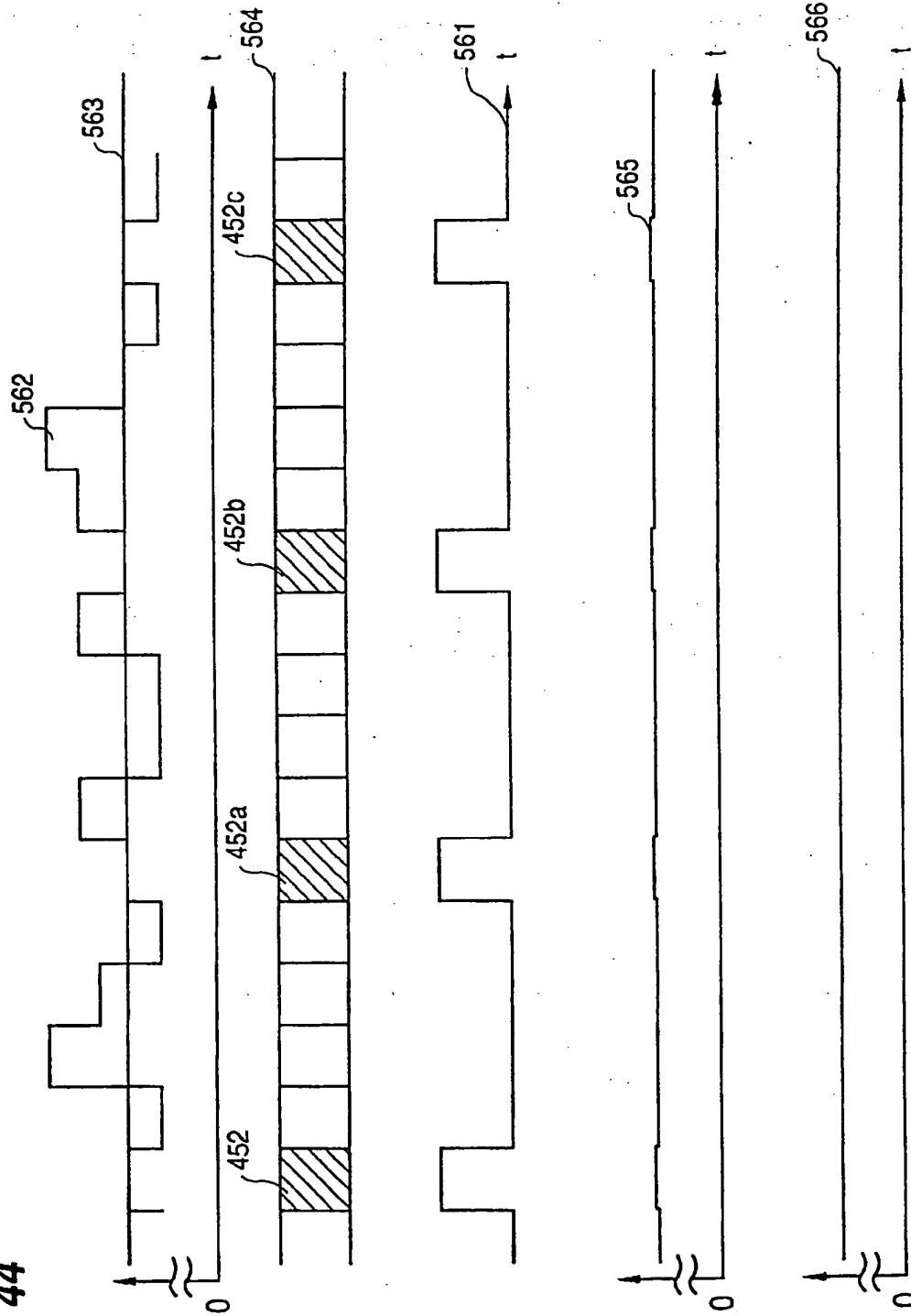


FIG. 45

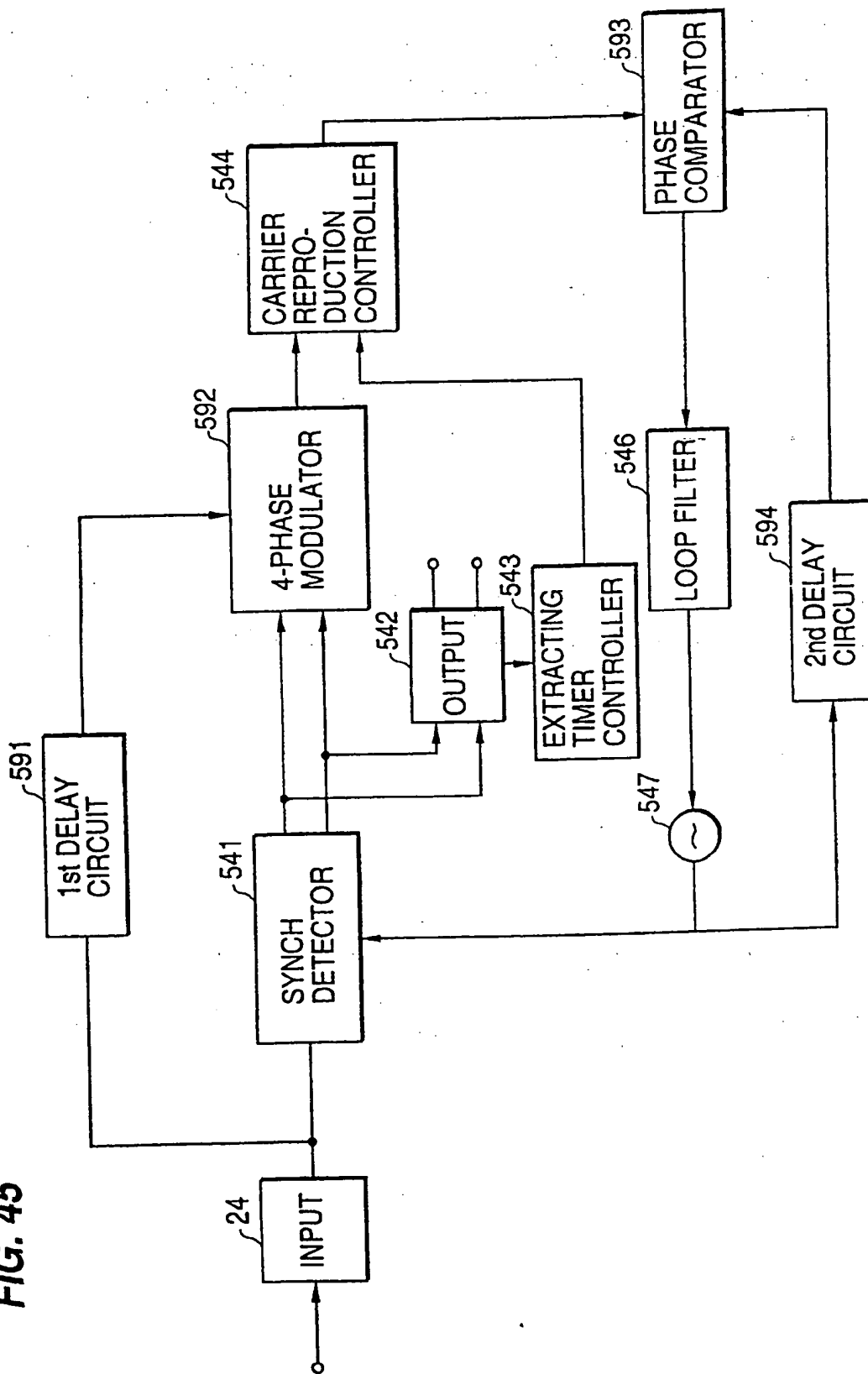


FIG. 46

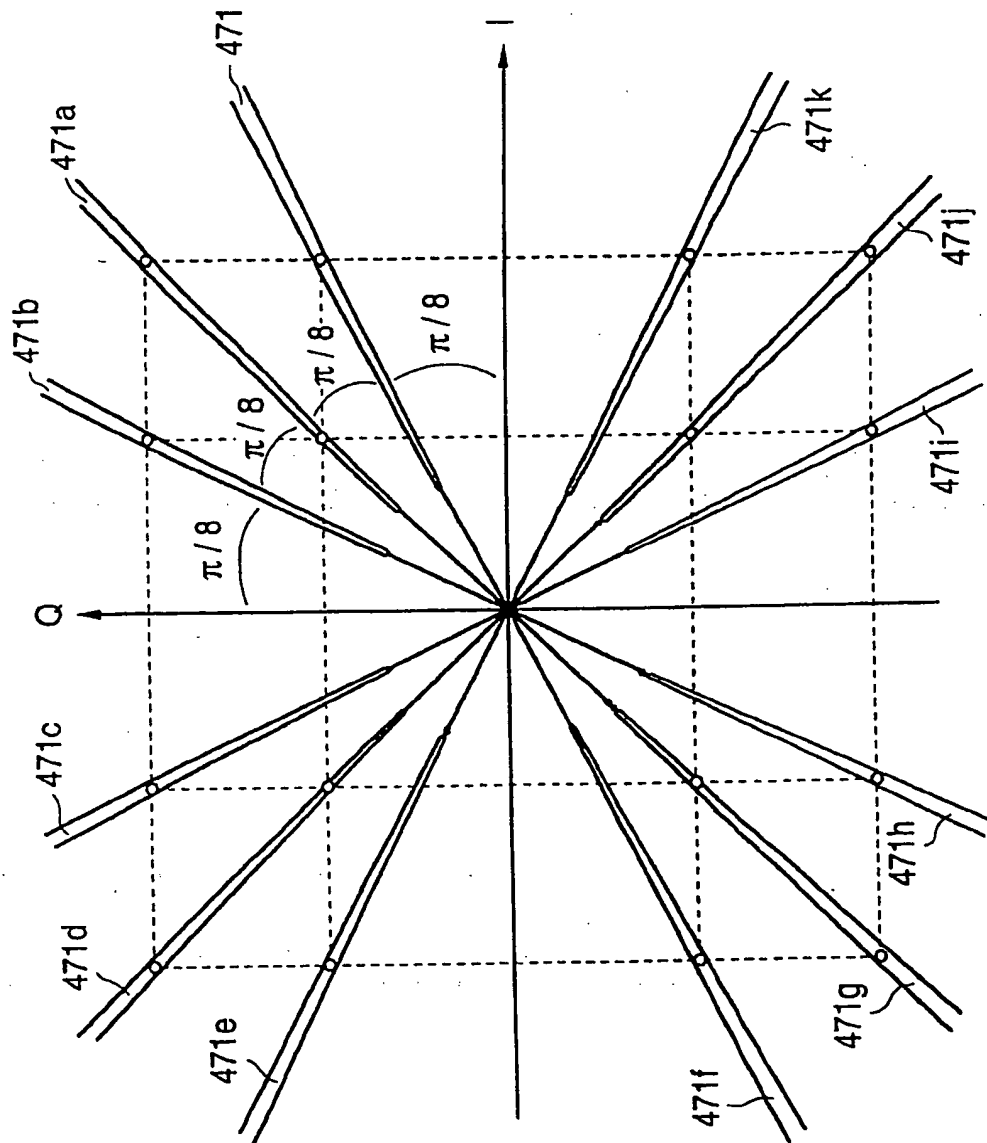


FIG. 47

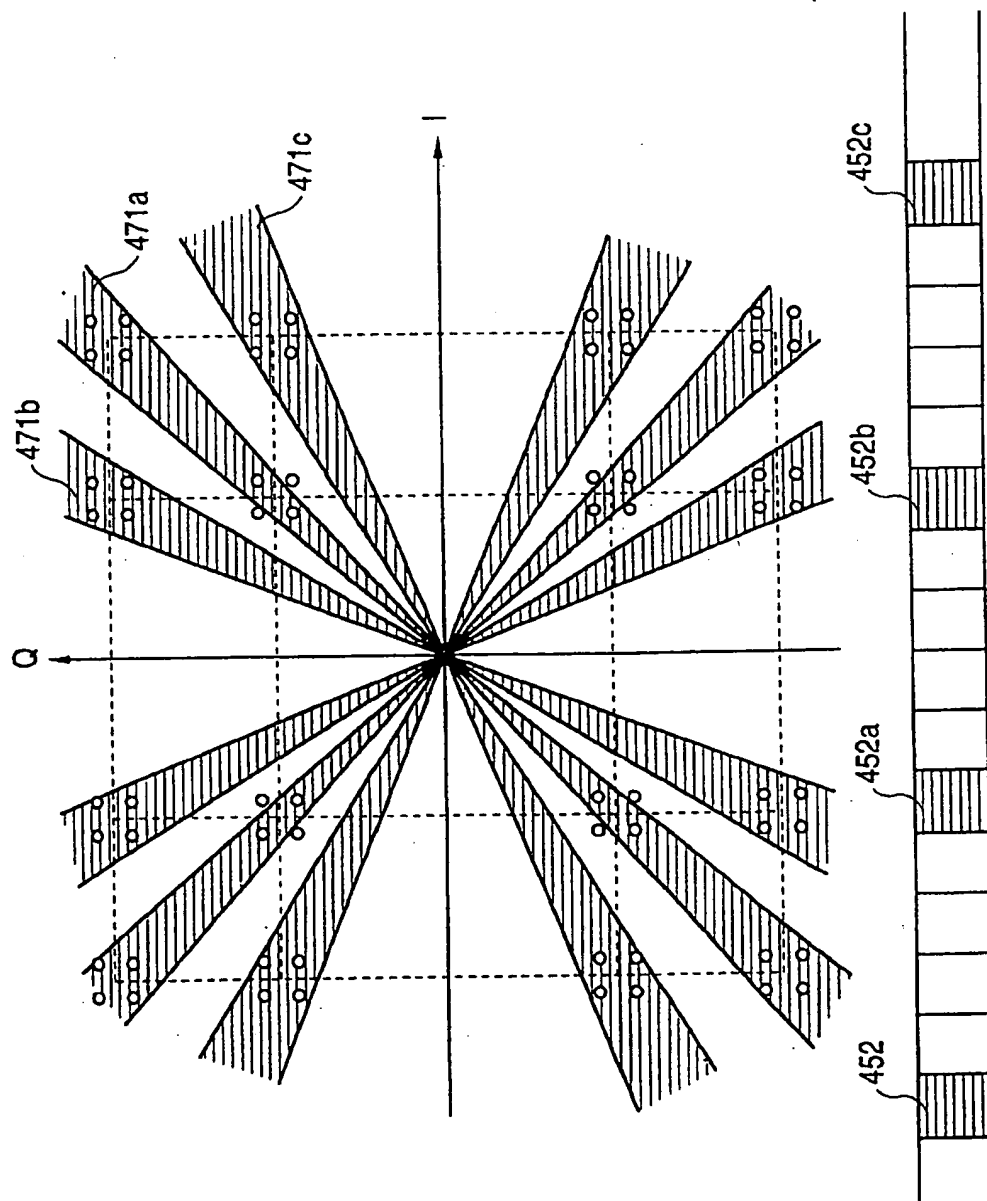


FIG. 48

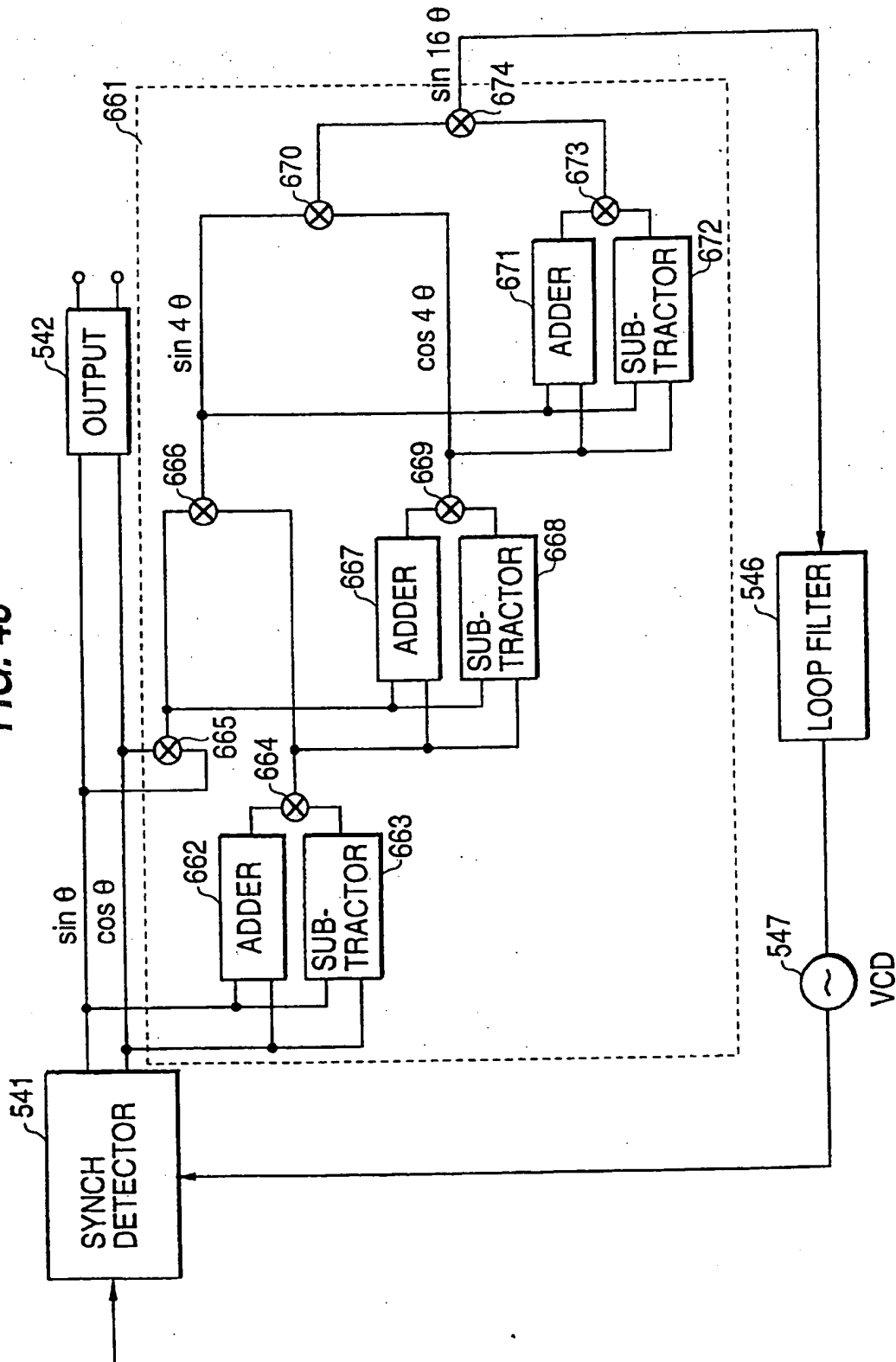


FIG. 49

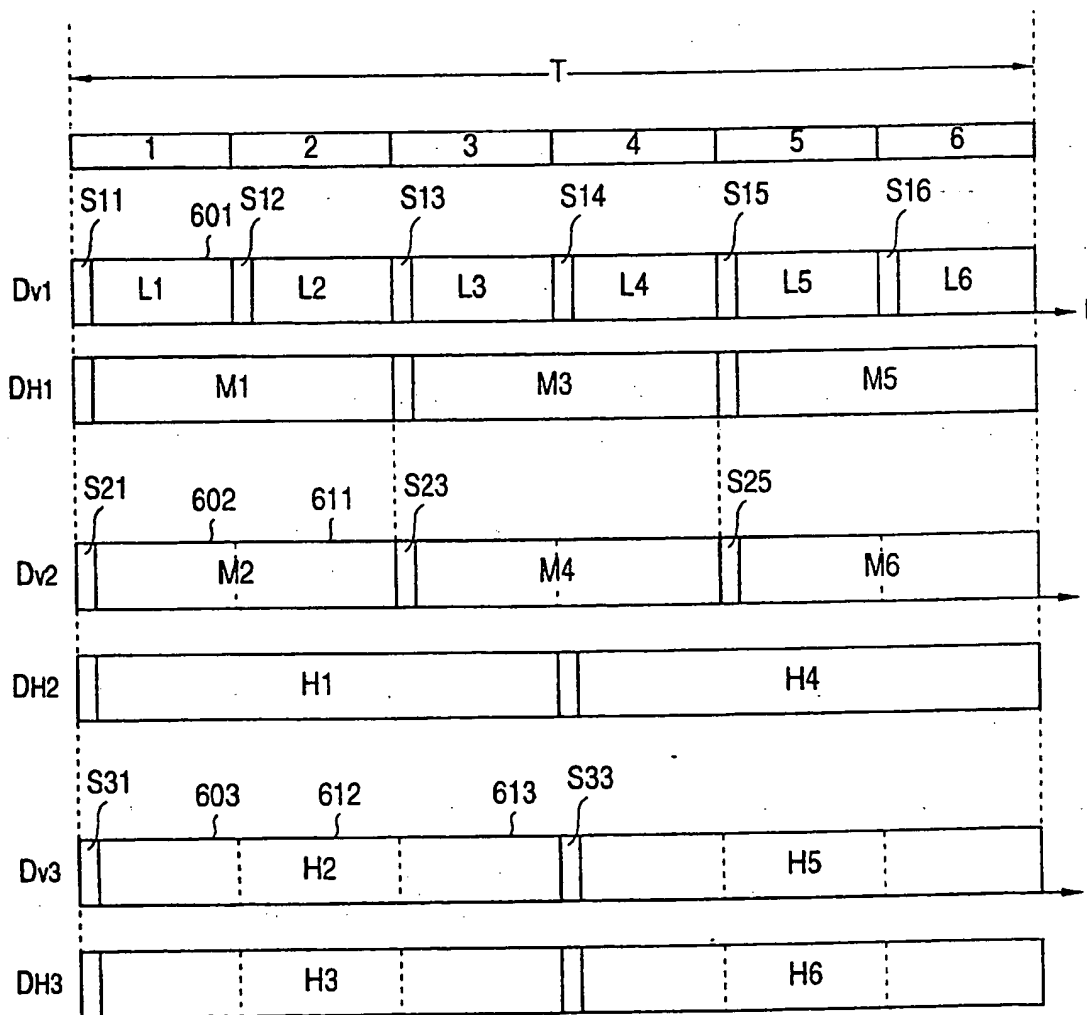


FIG. 50

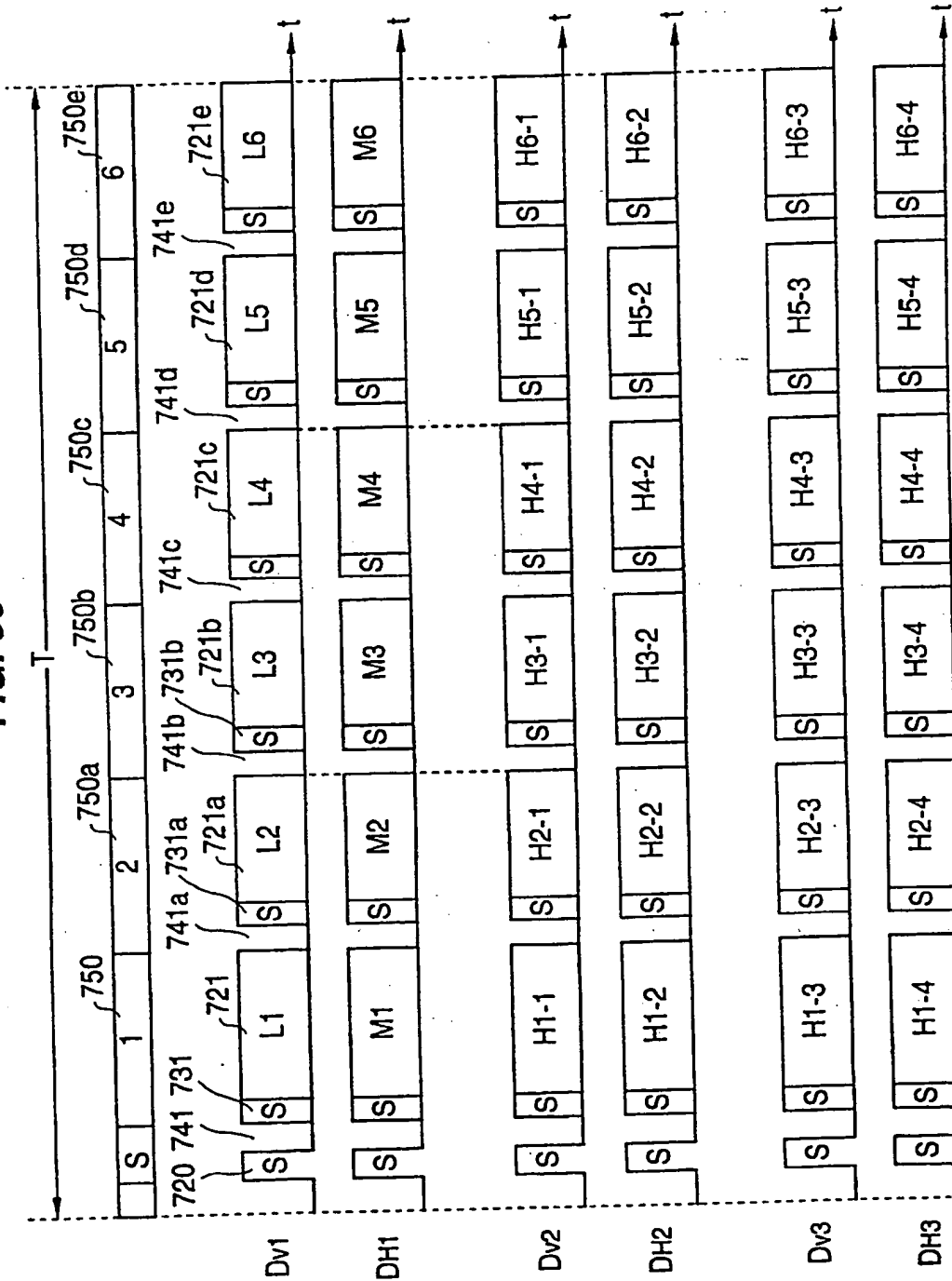


FIG. 51

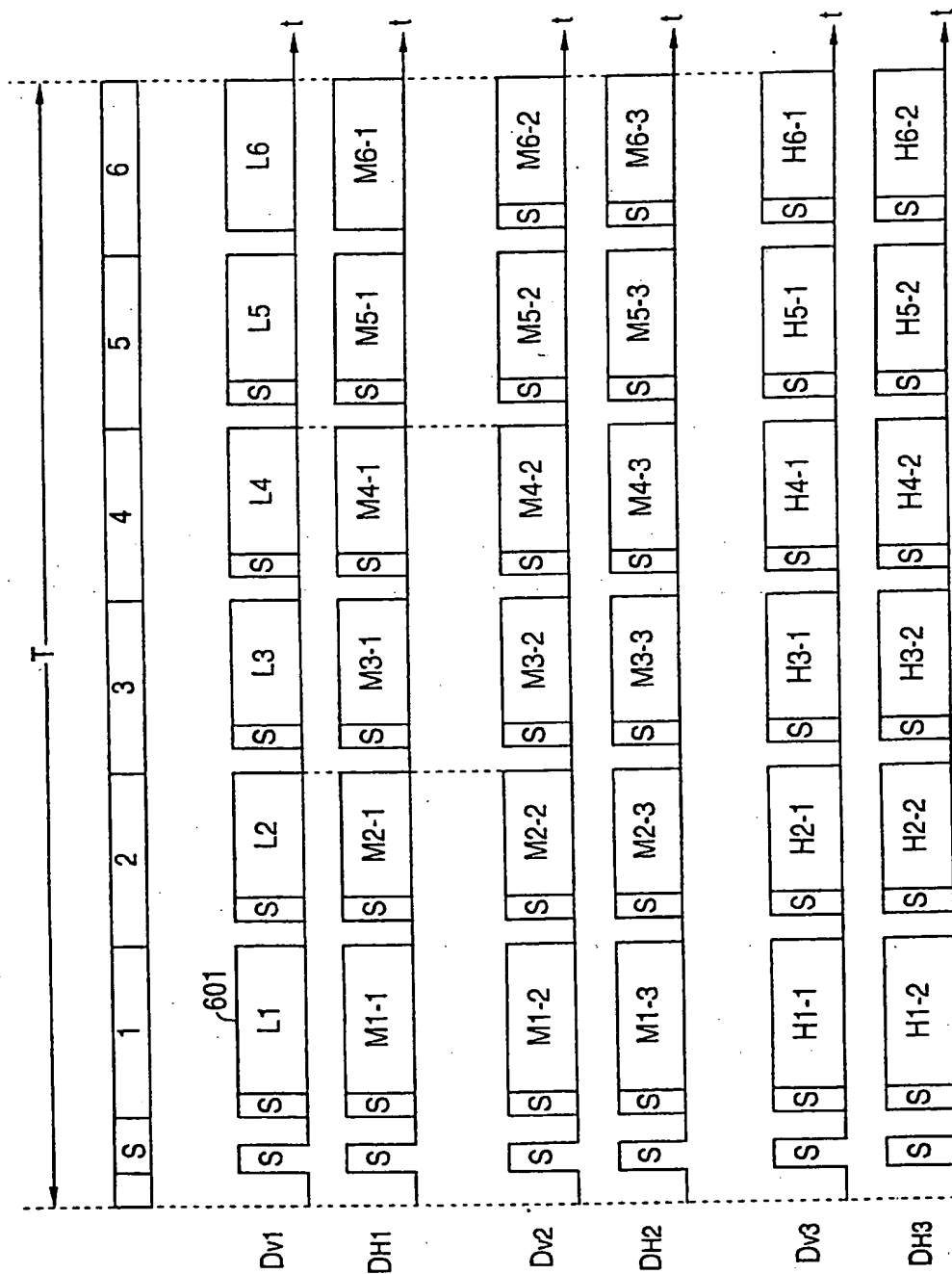


FIG. 52

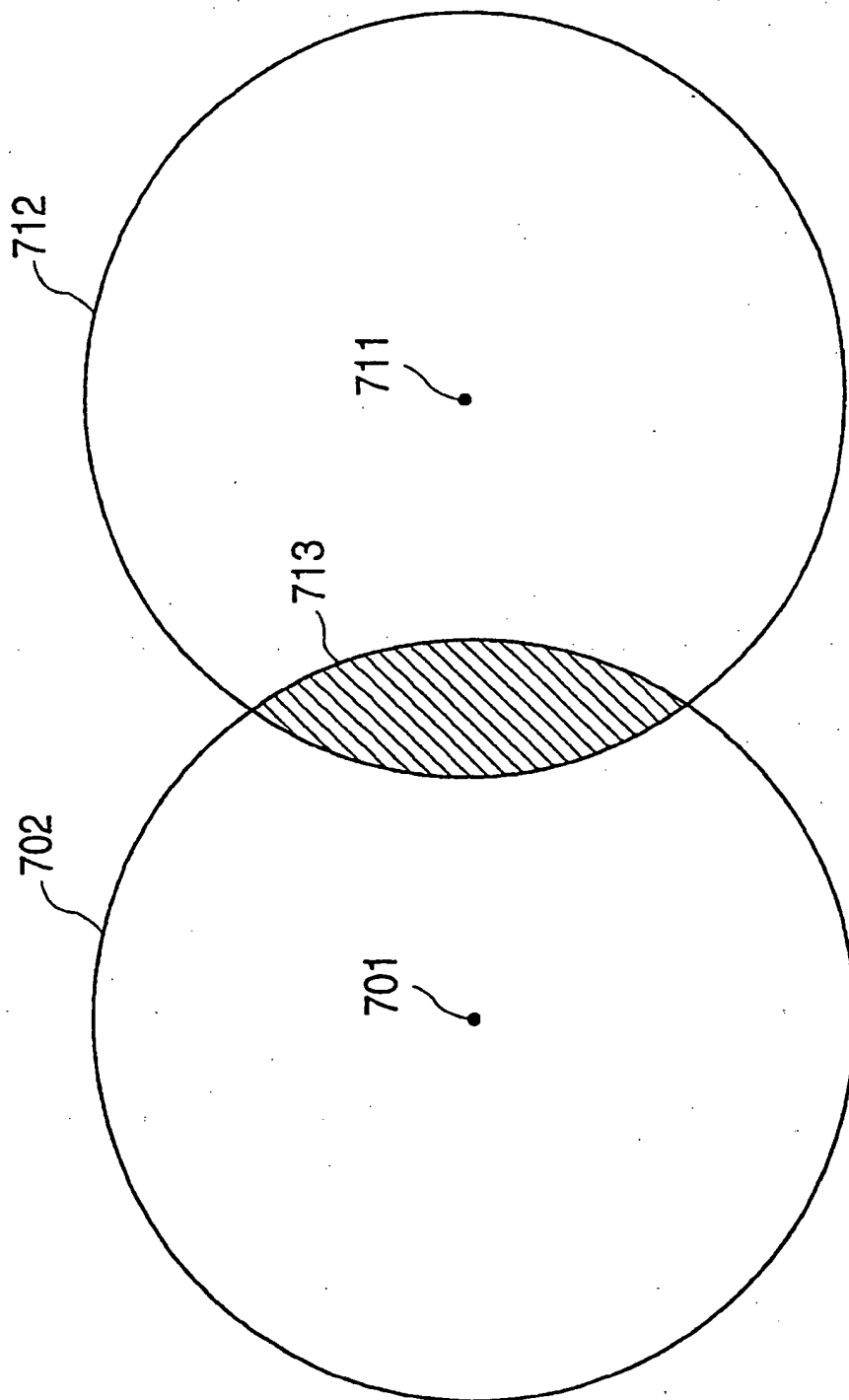


FIG. 53

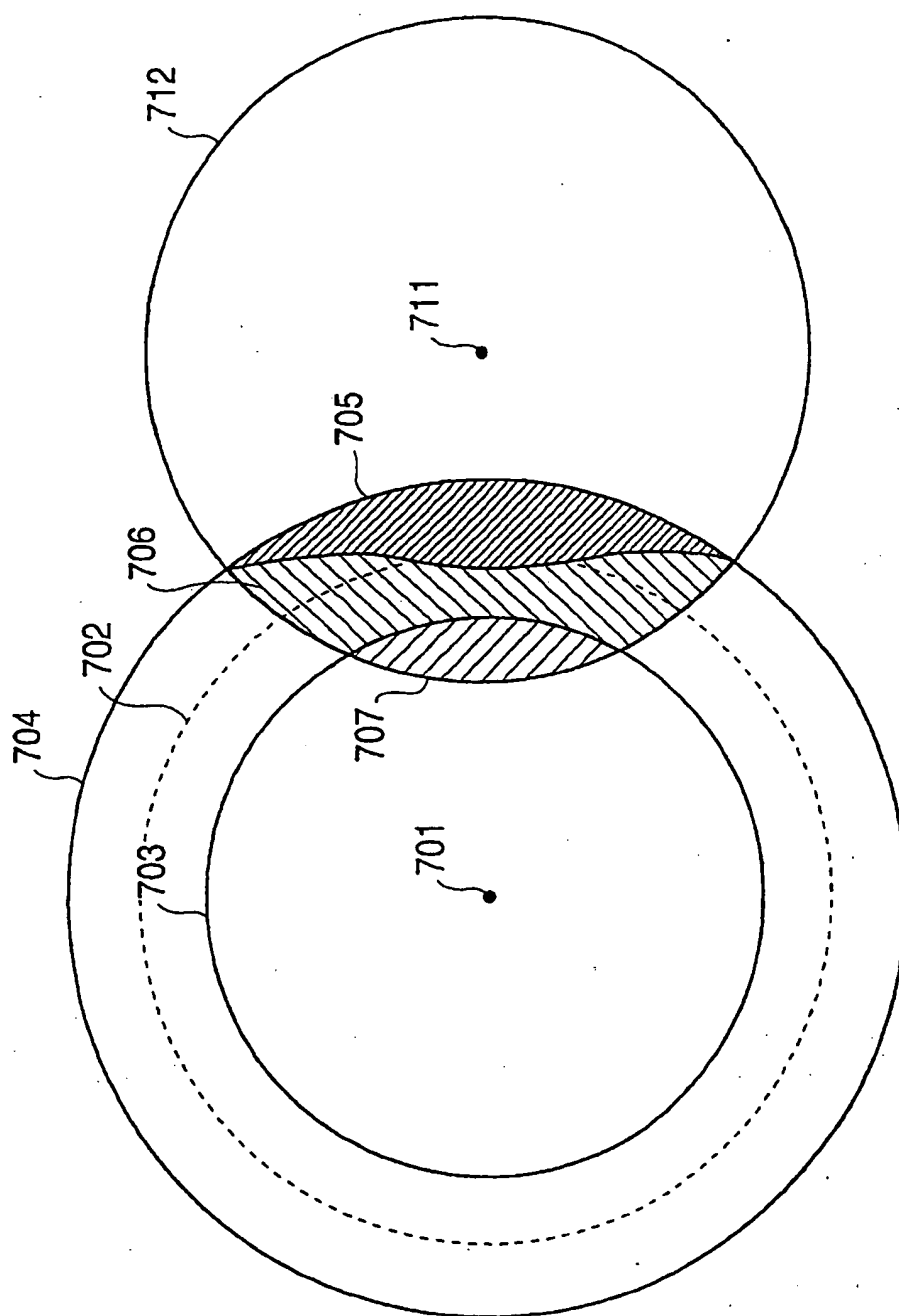


FIG. 54

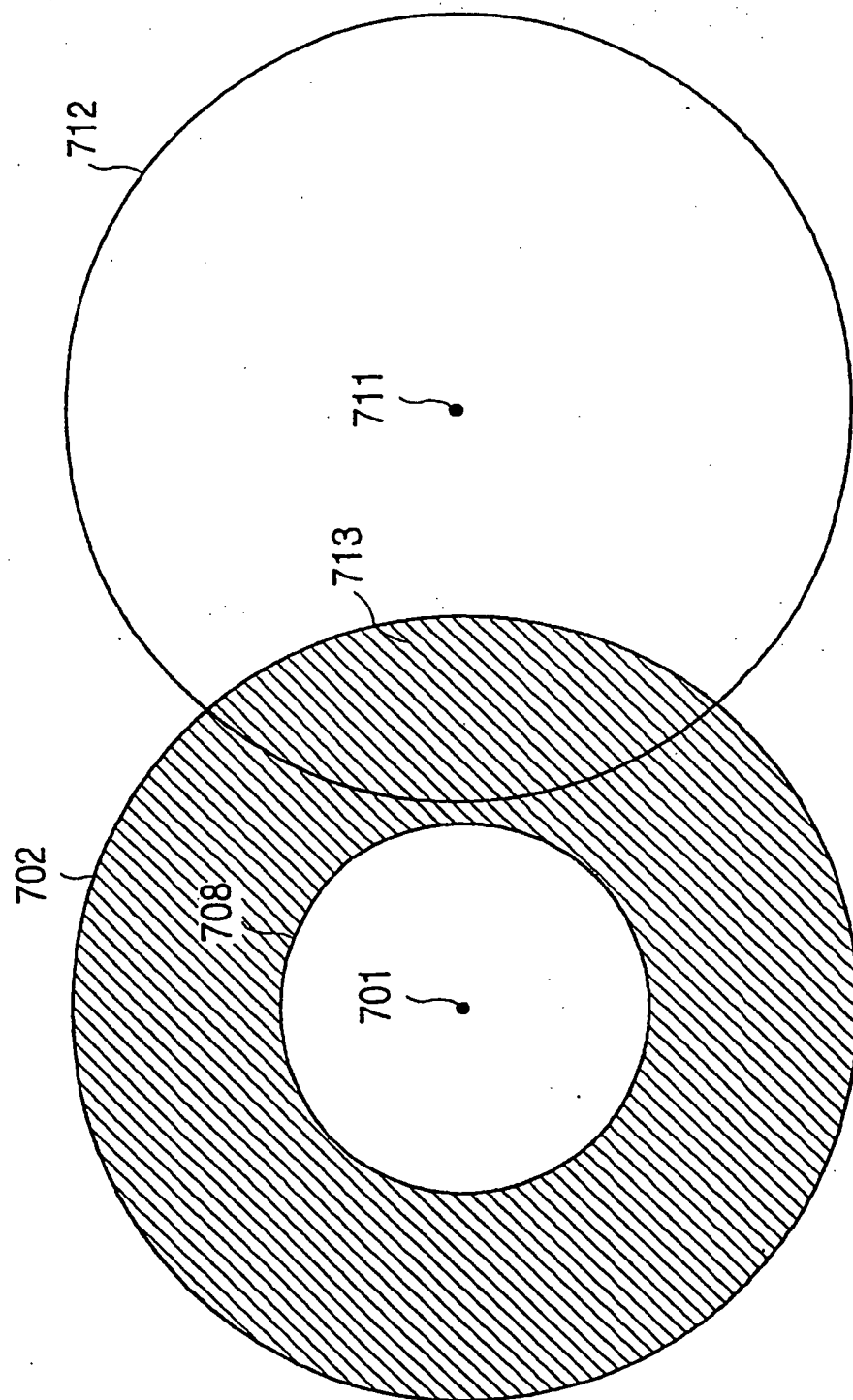


FIG. 55

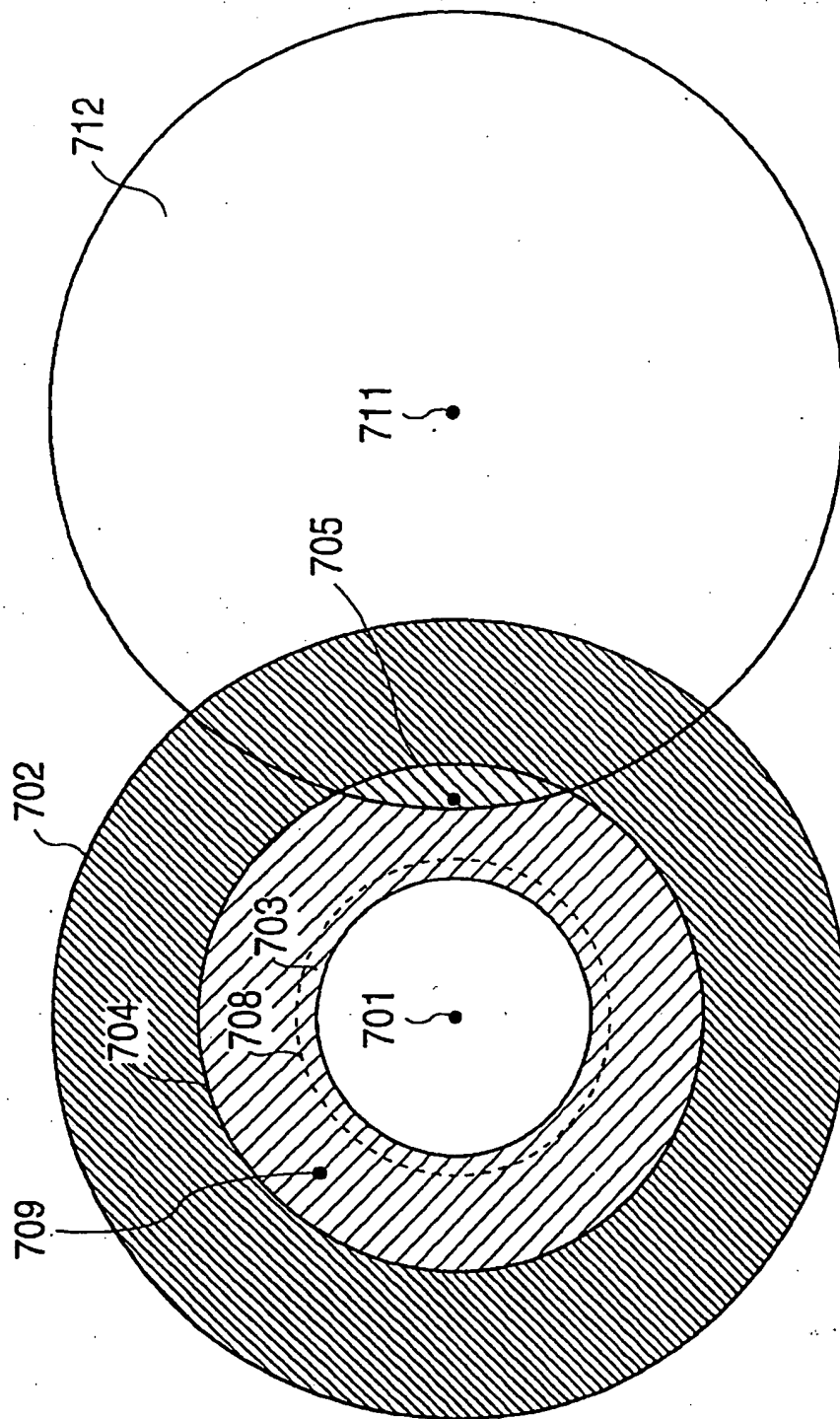


FIG. 56

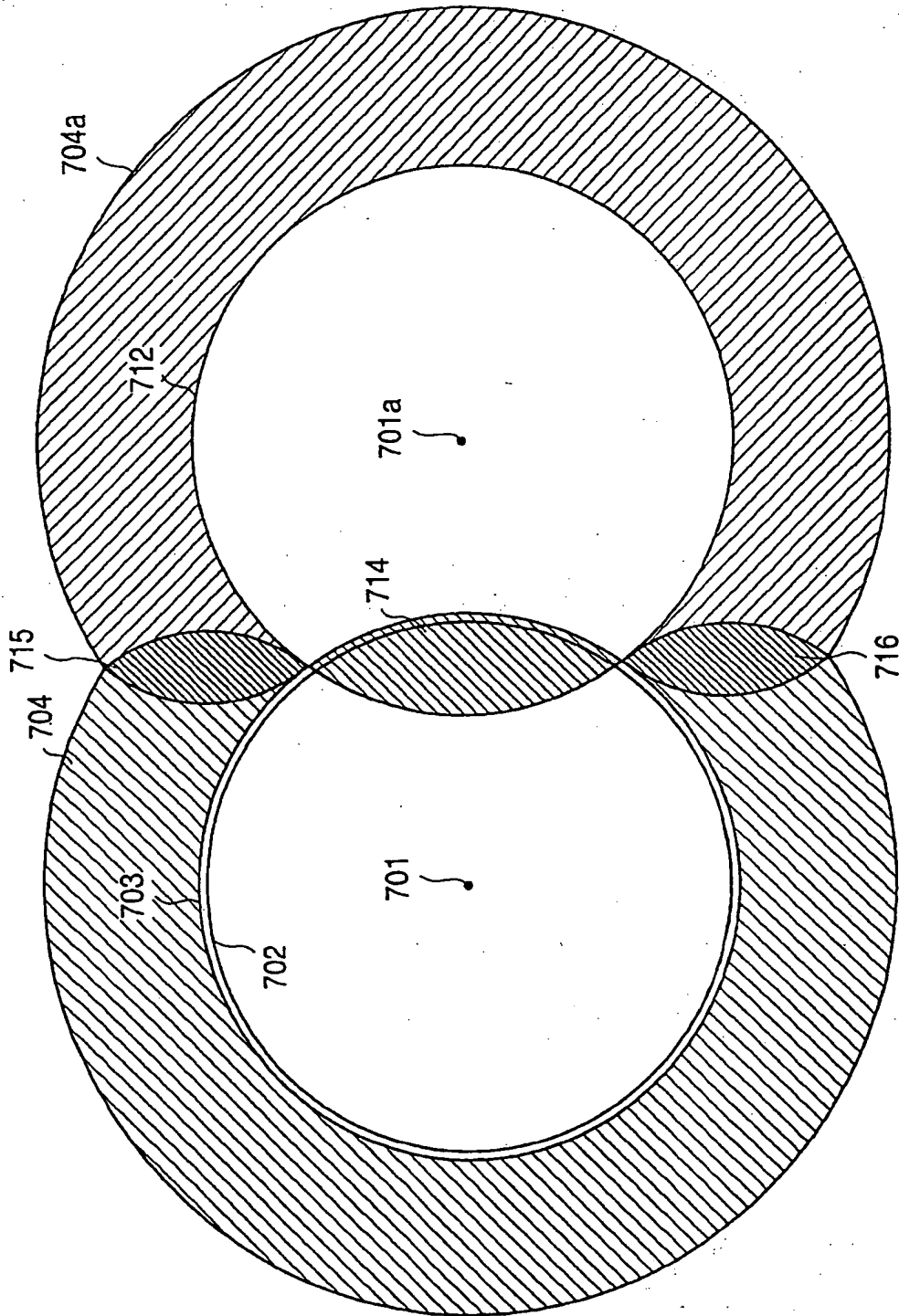


FIG. 57

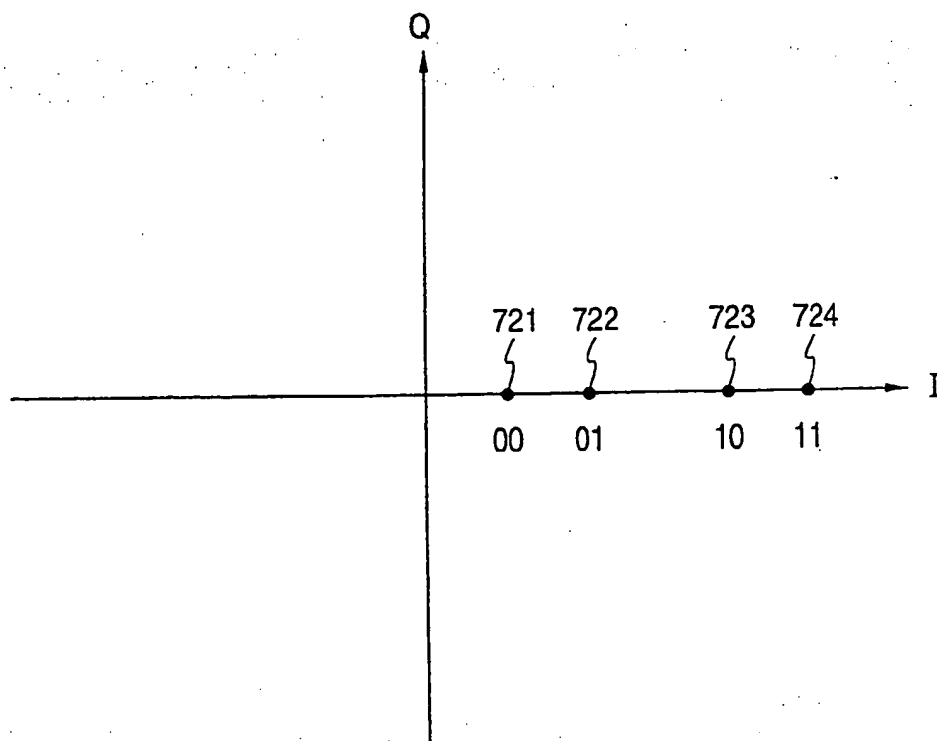


FIG. 58

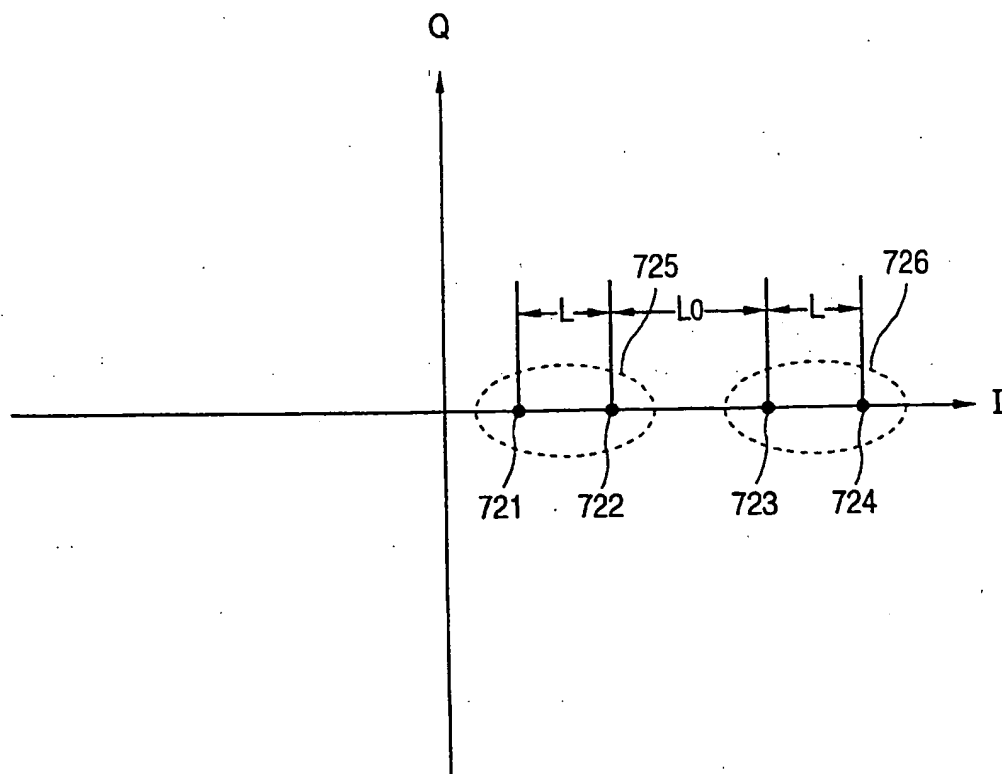


FIG. 59(a)

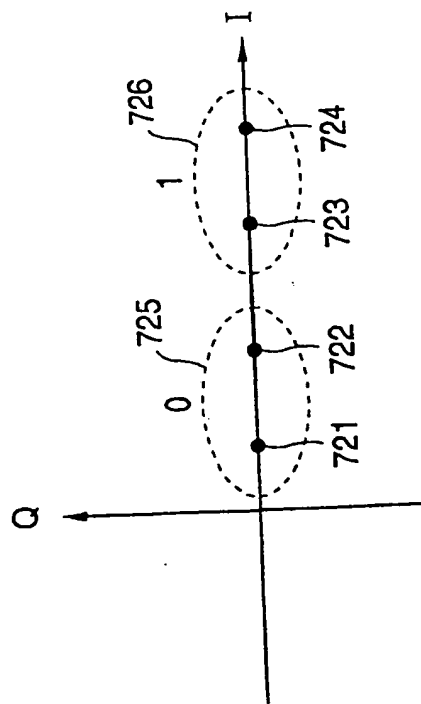


FIG. 59(c)

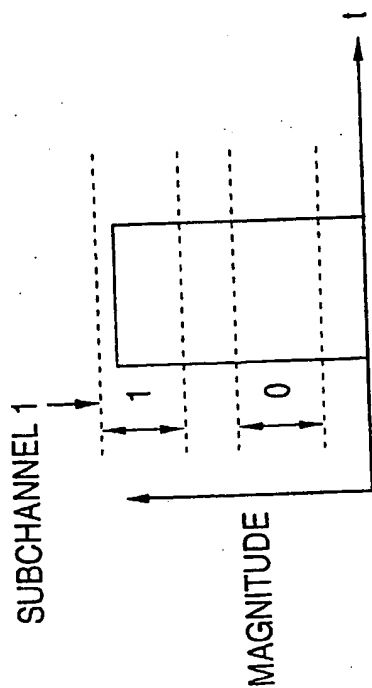


FIG. 59(b)

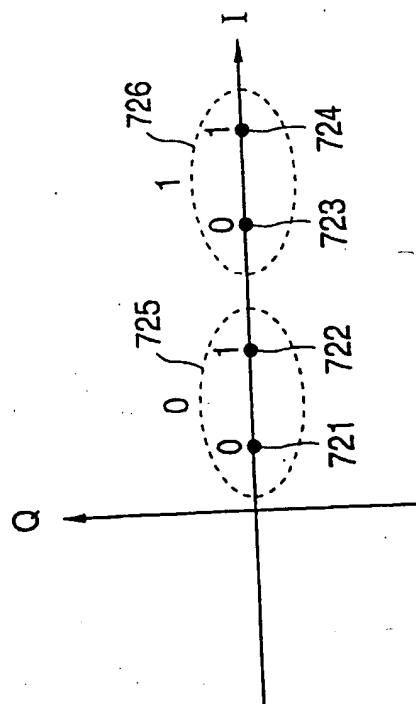


FIG. 59(d)

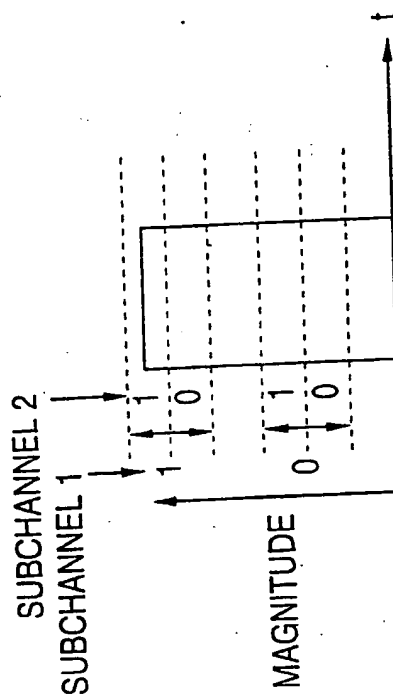


FIG. 60

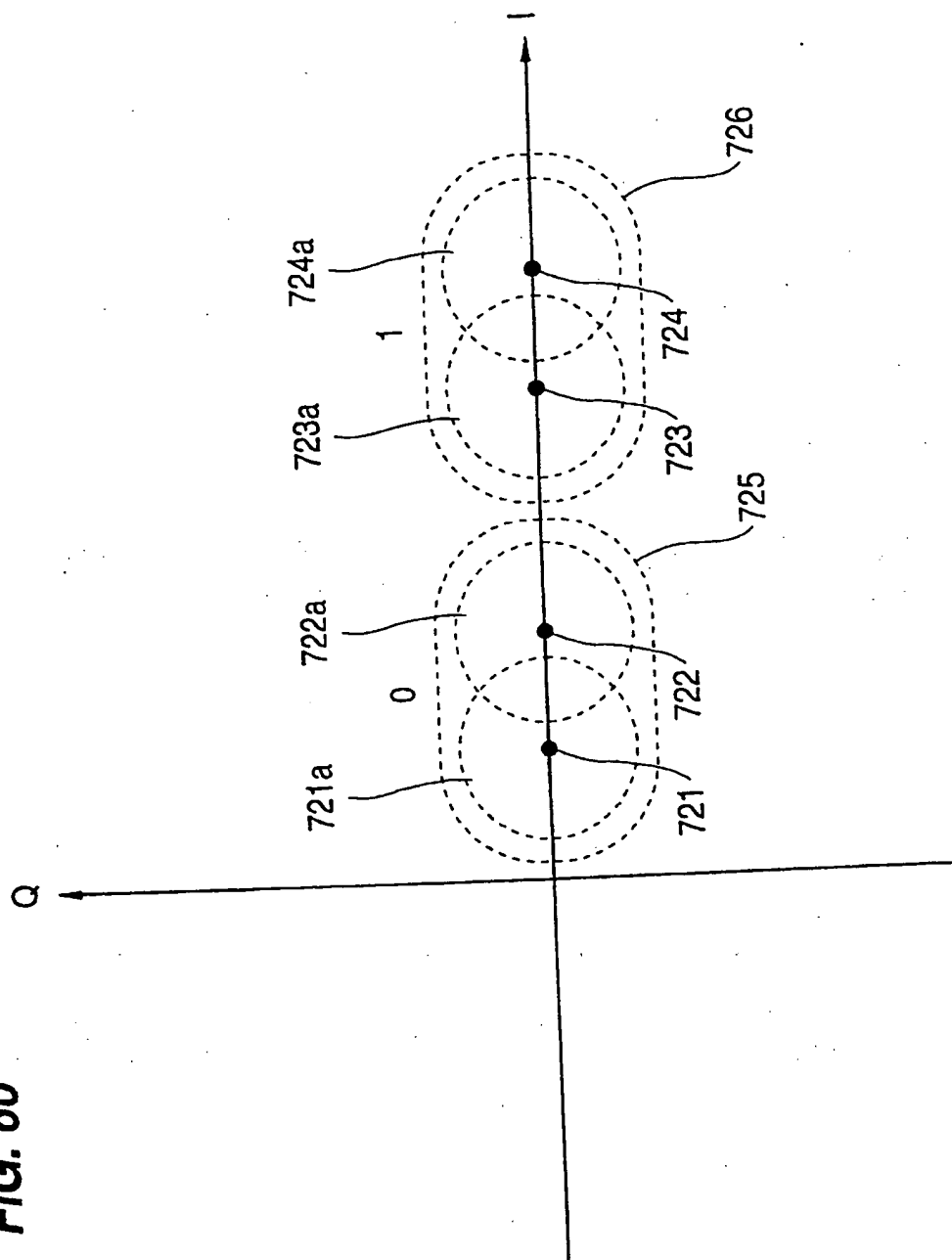


FIG. 61

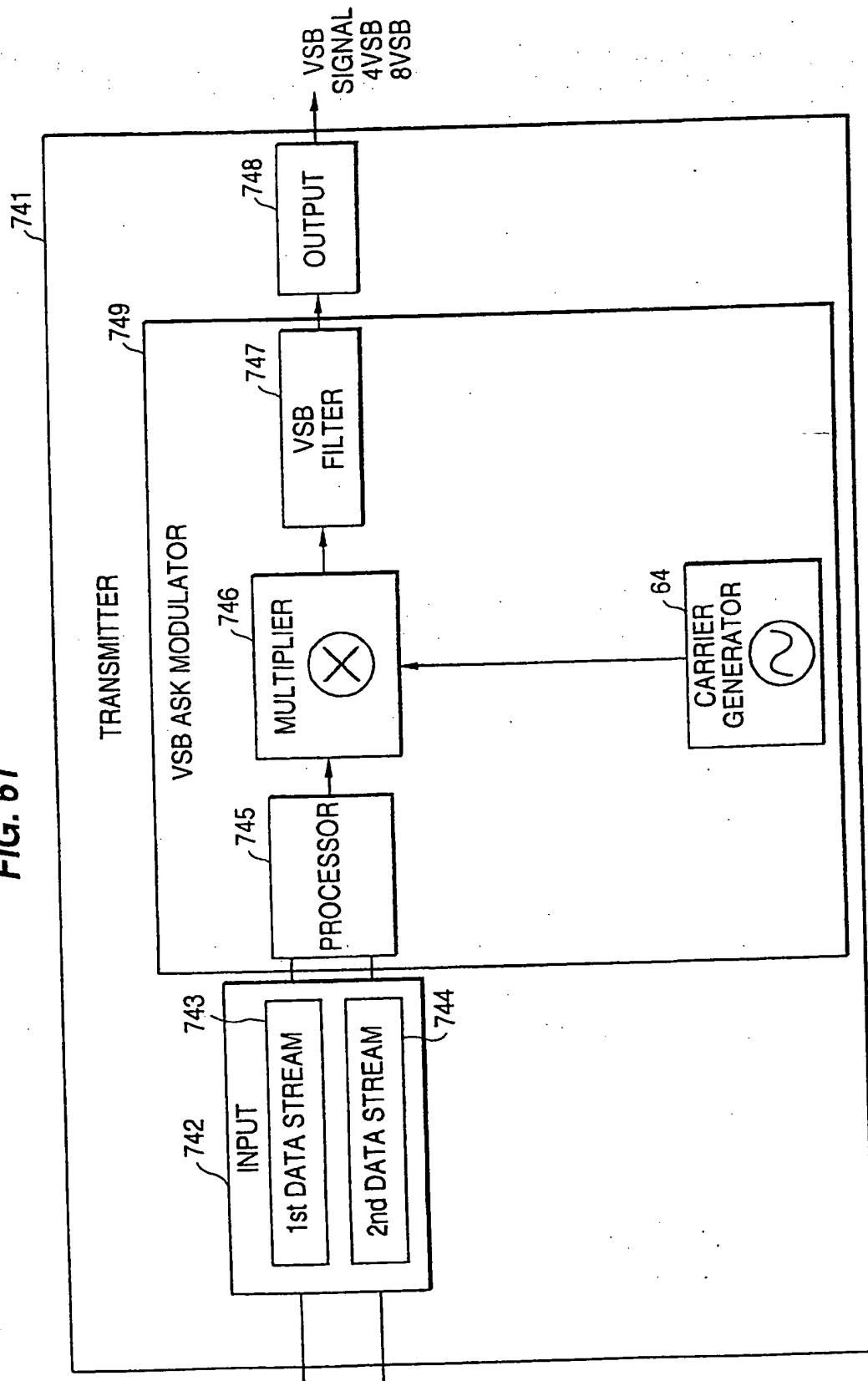


FIG. 62(a)

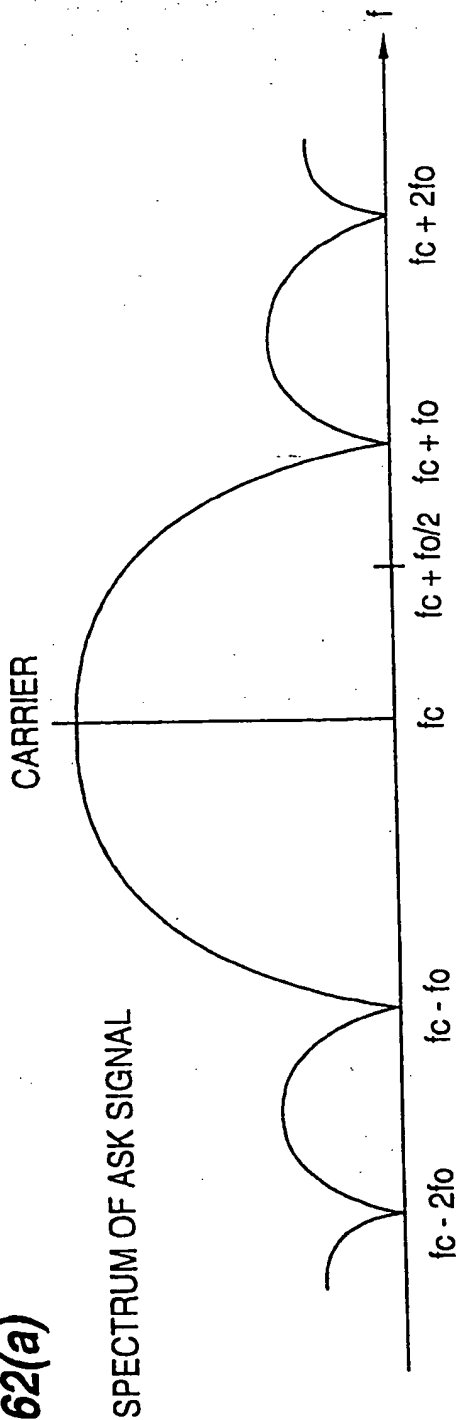


FIG. 62(b)

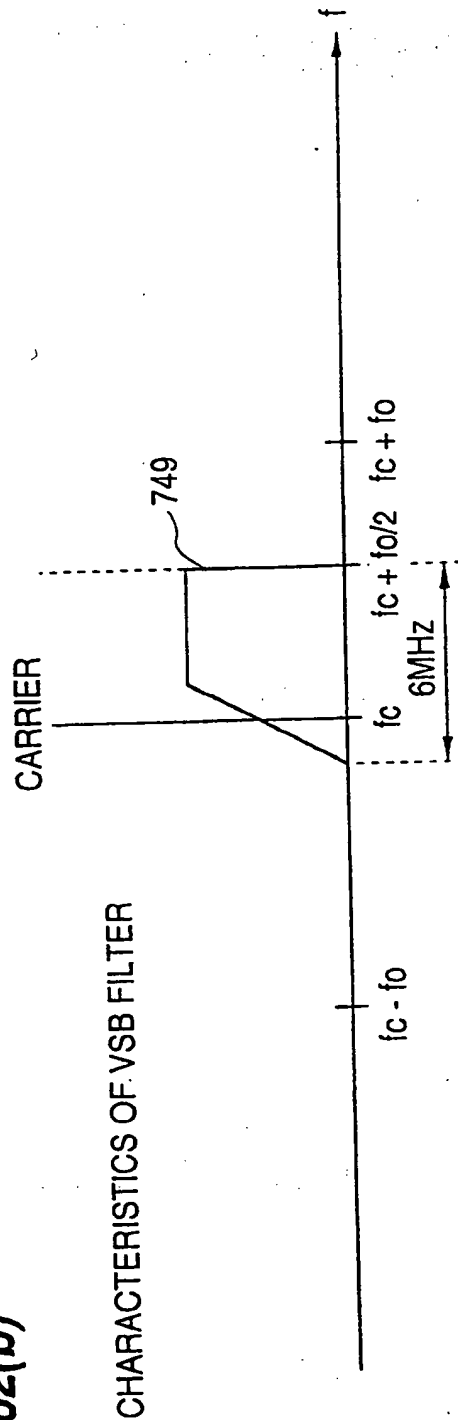


FIG. 63

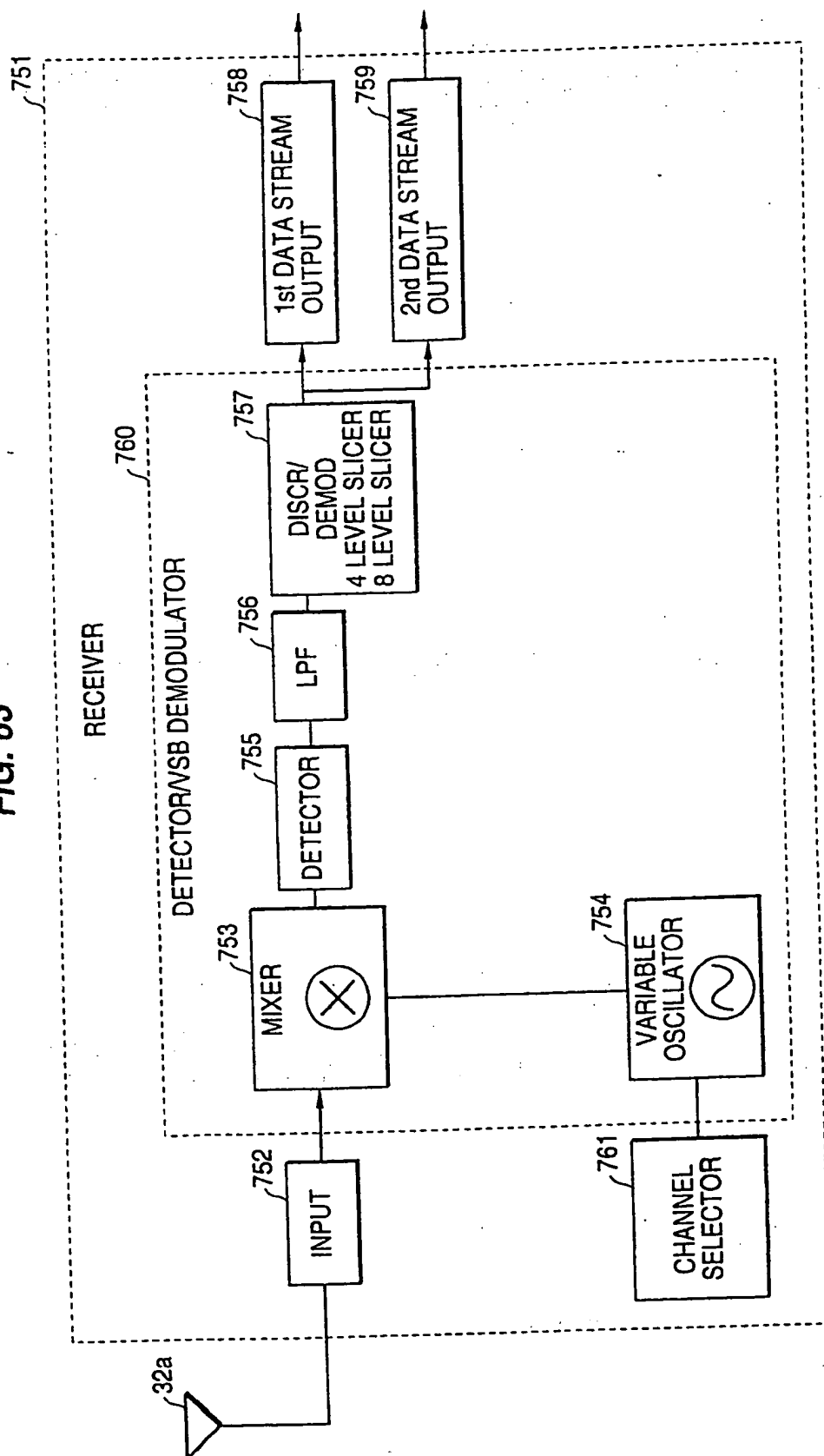


FIG. 64

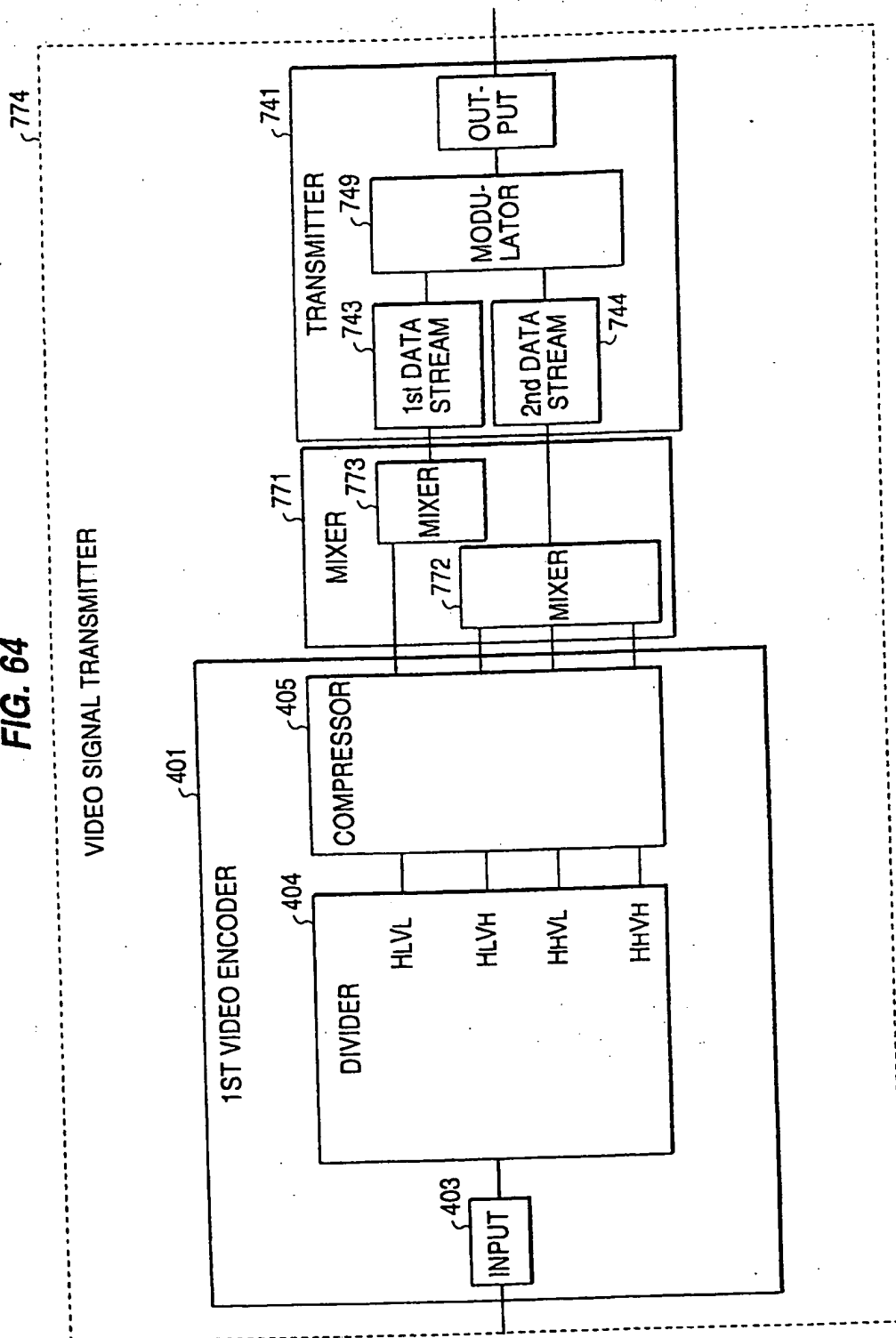


FIG. 65

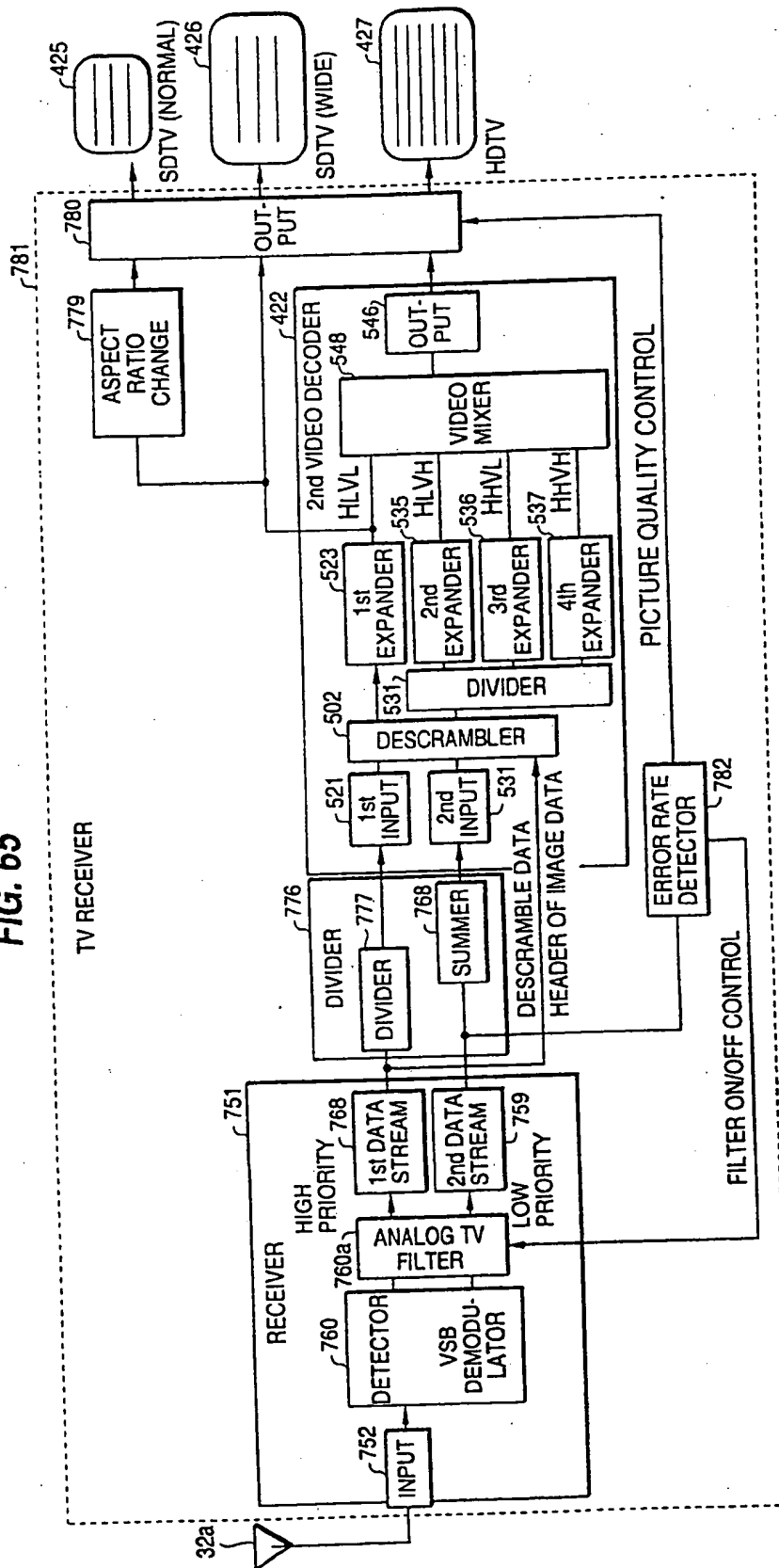
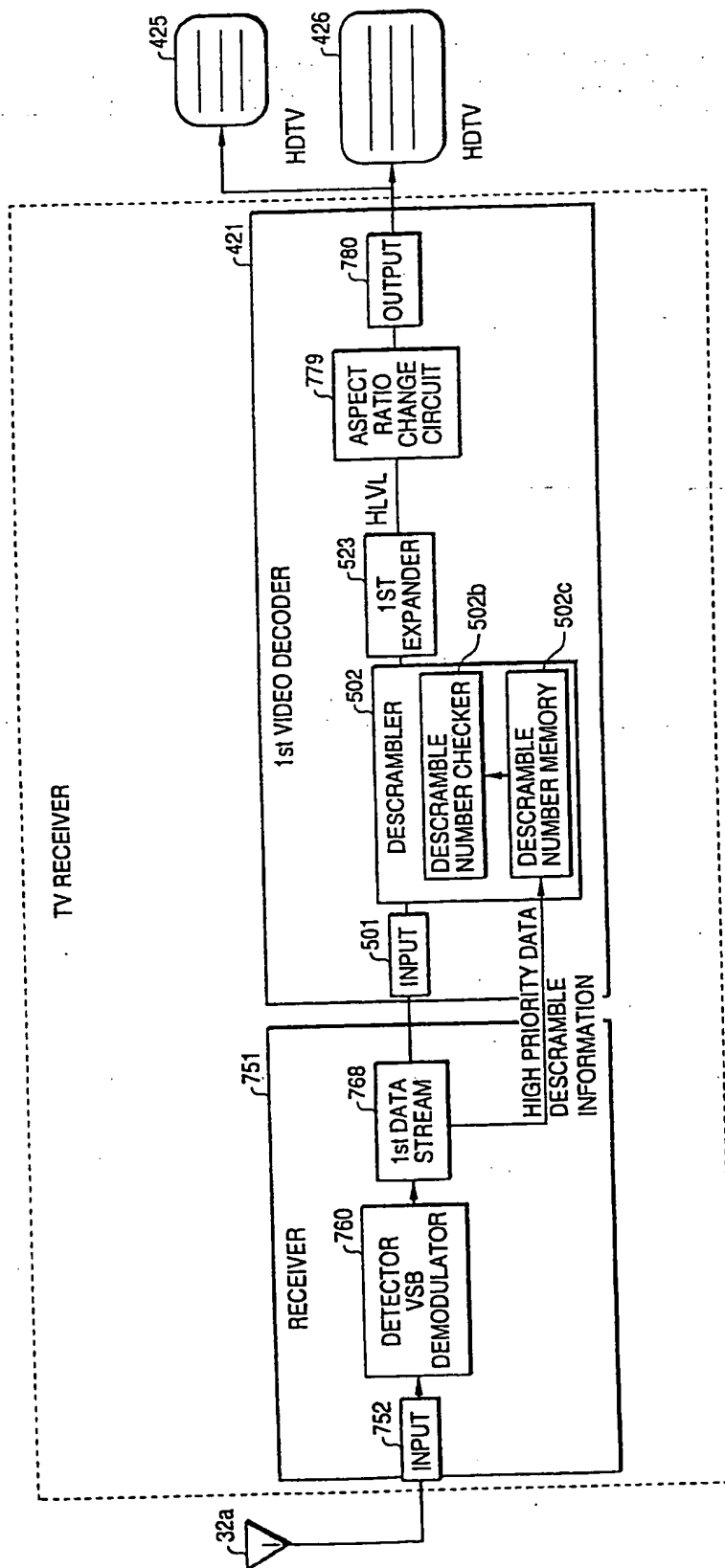


FIG. 66



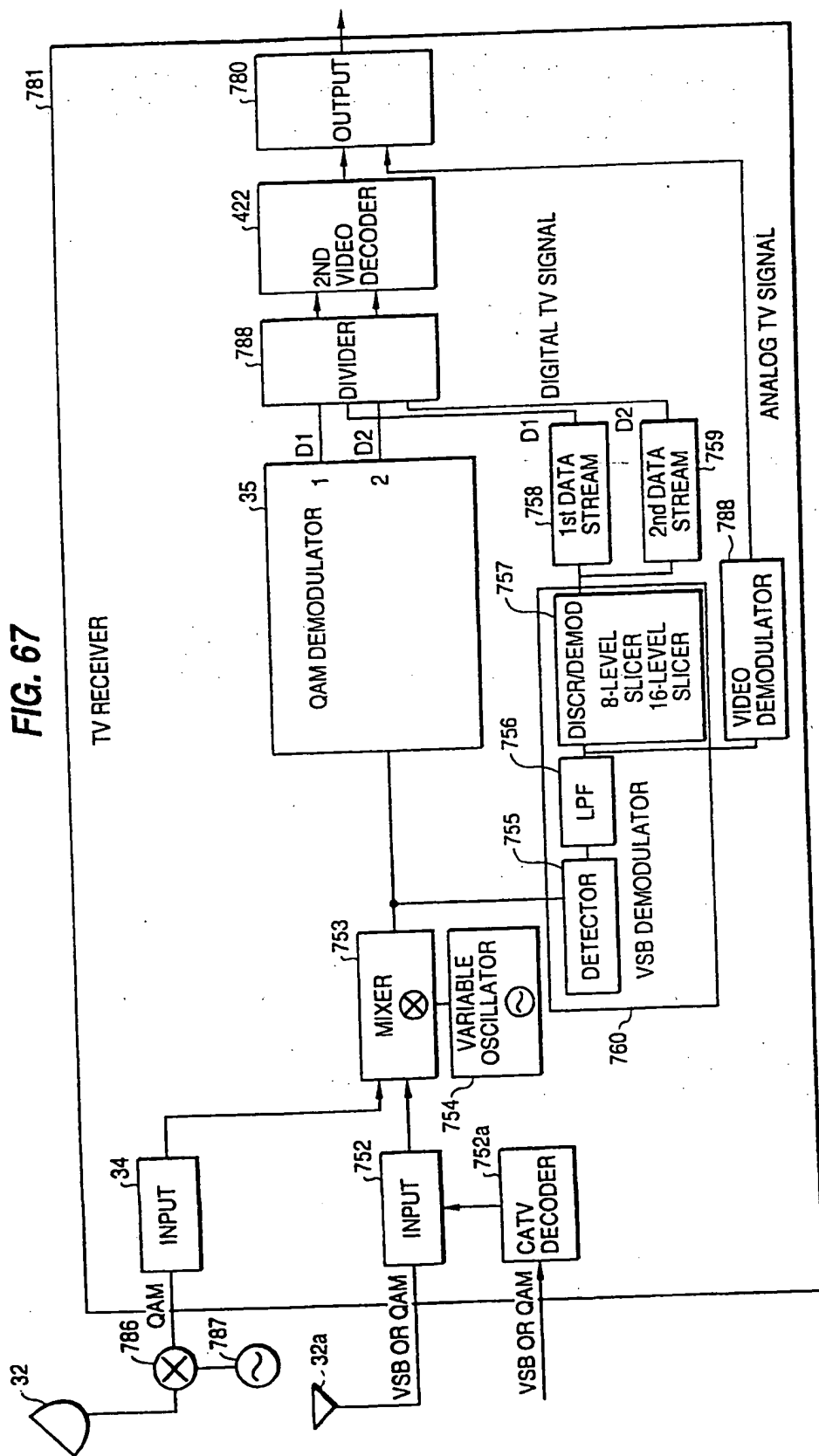


FIG. 68(a)

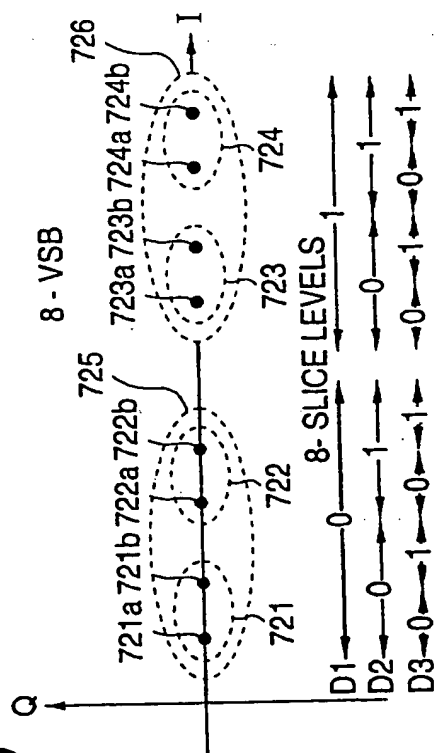


FIG. 68(b)

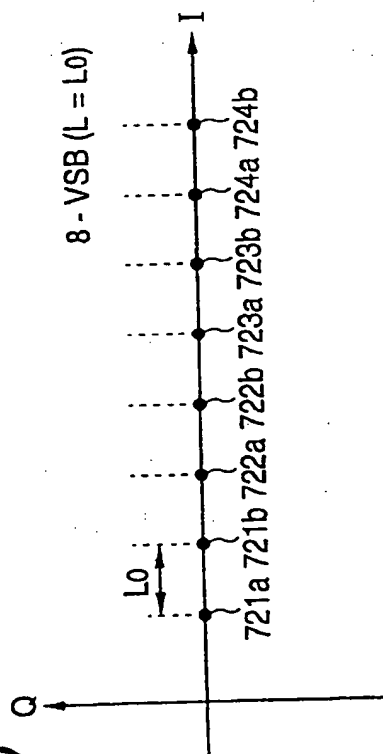


FIG. 68(c)

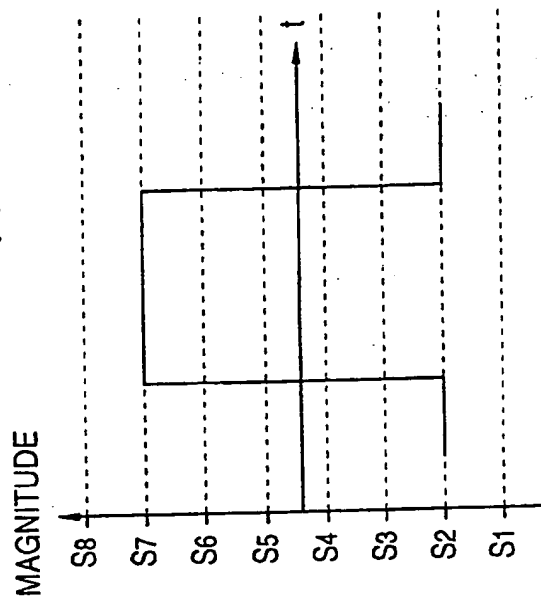


FIG. 69

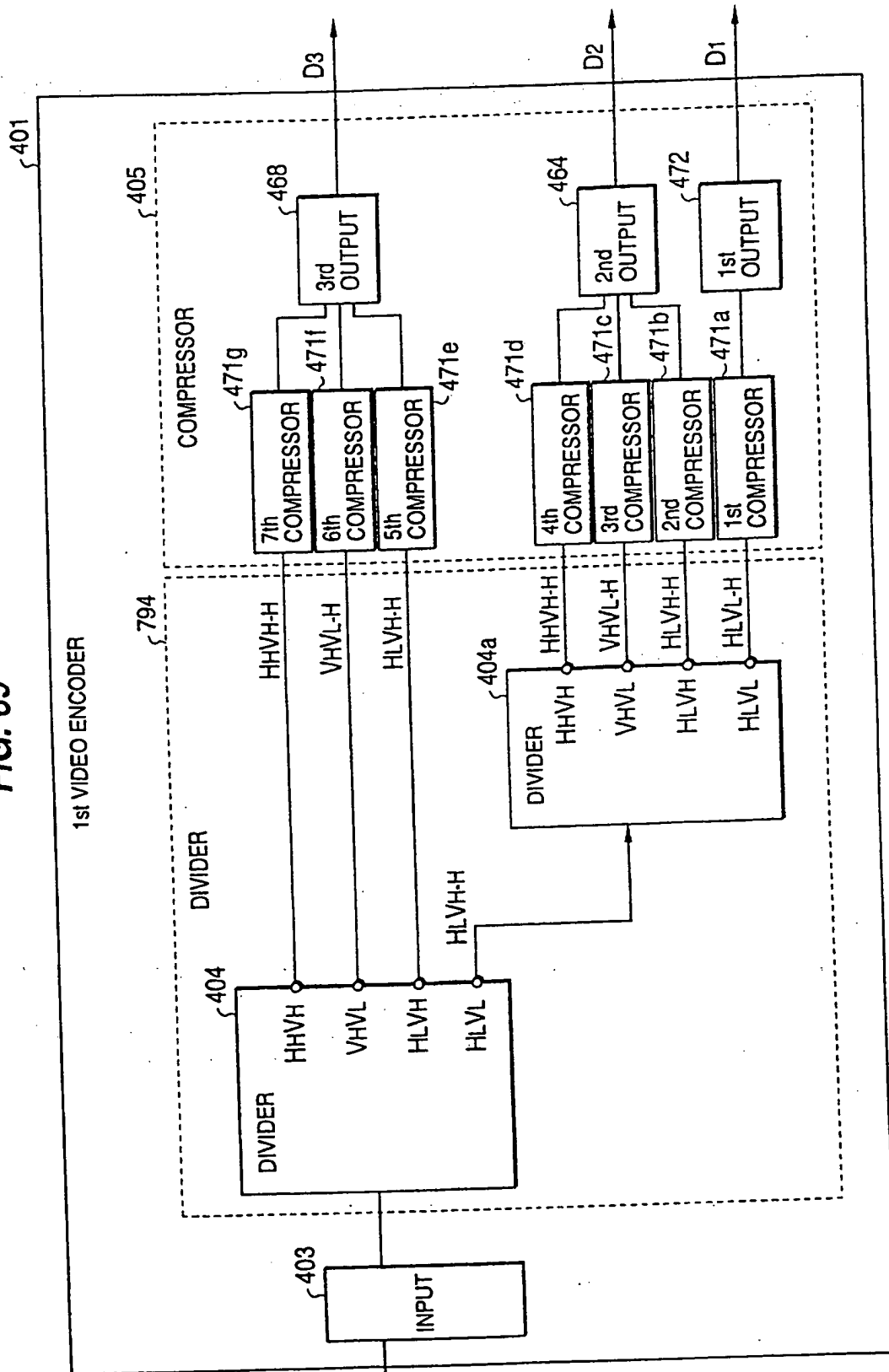


FIG. 70

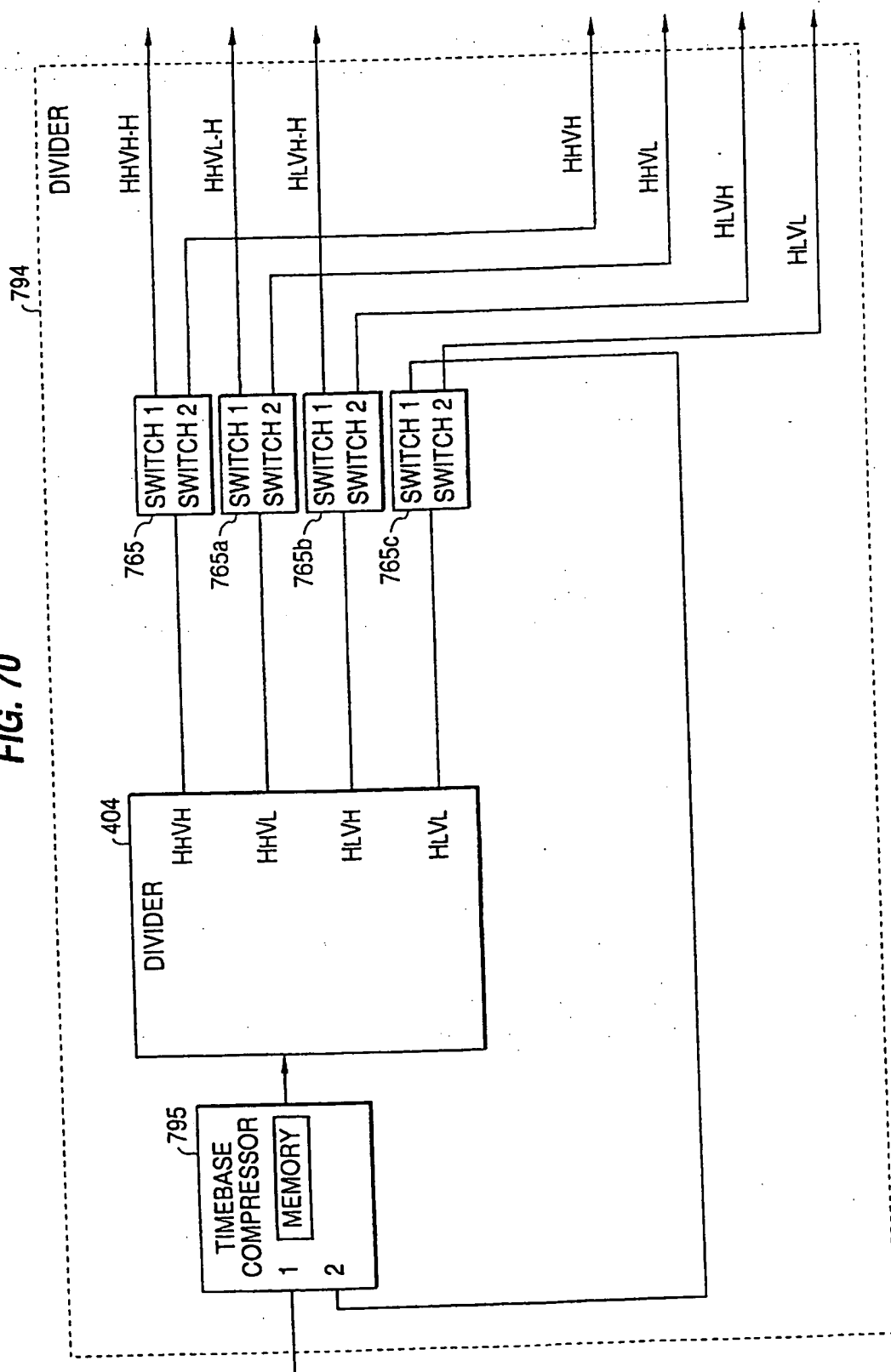


FIG. 71

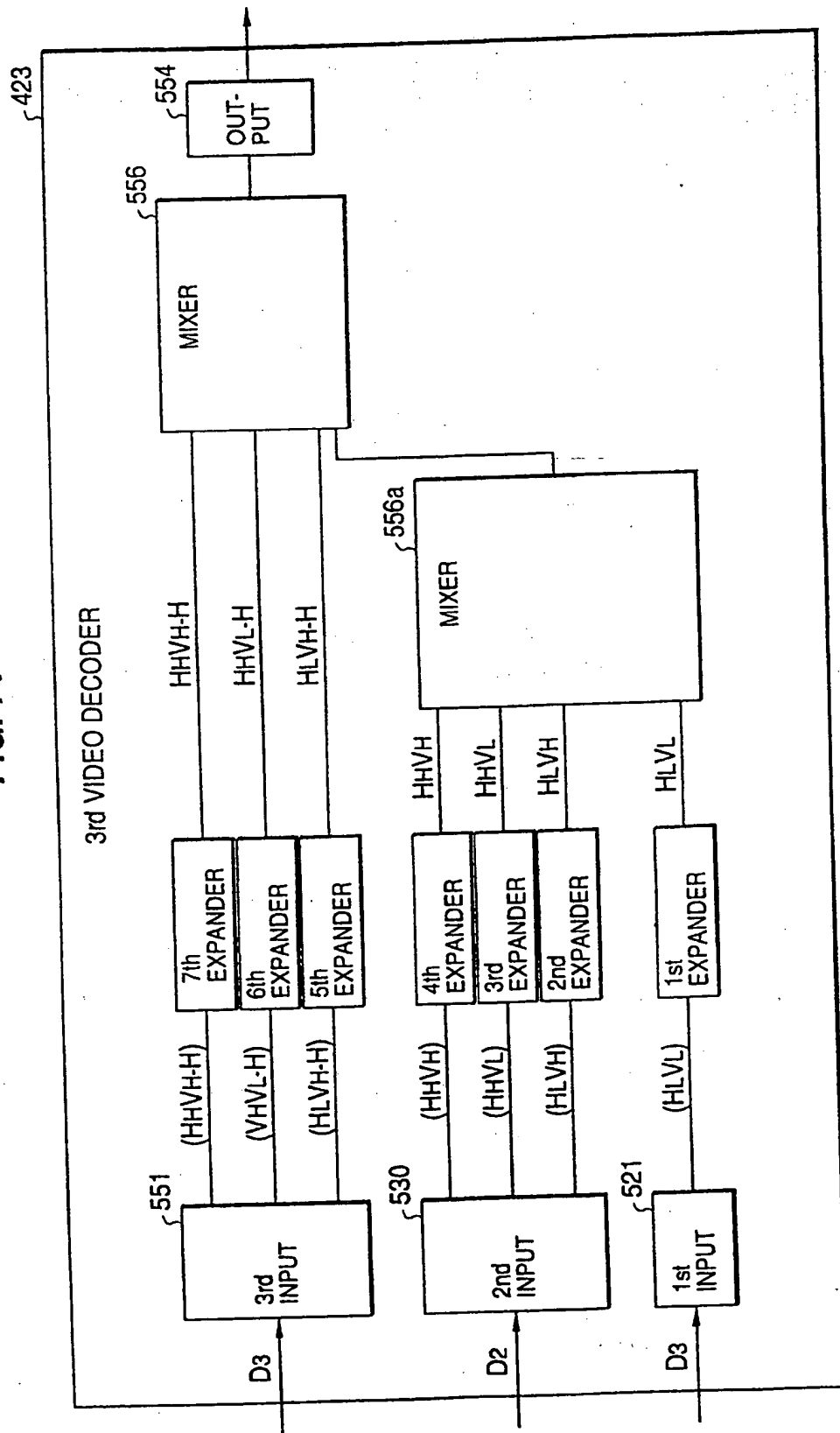


FIG. 72

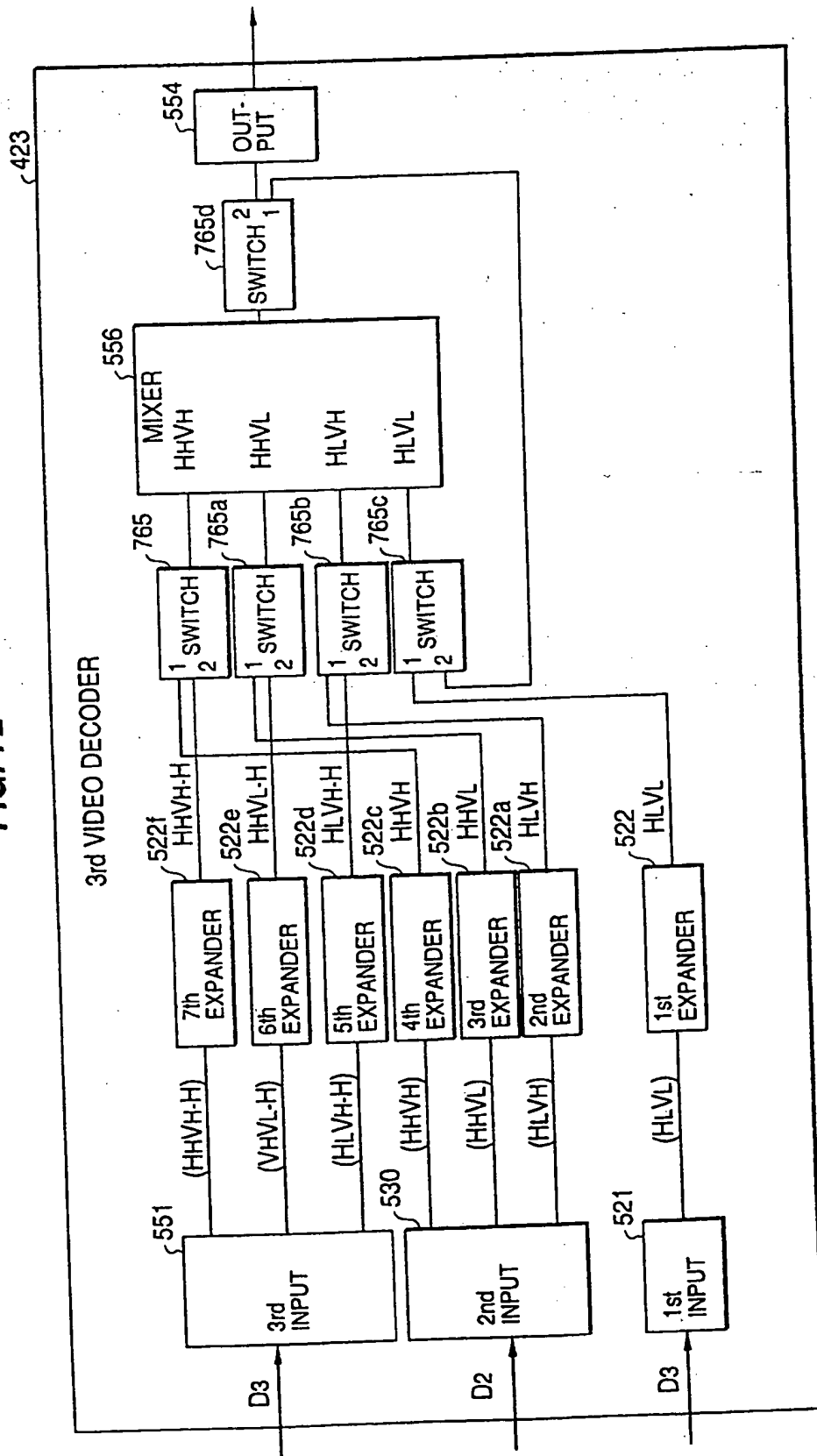


FIG. 73

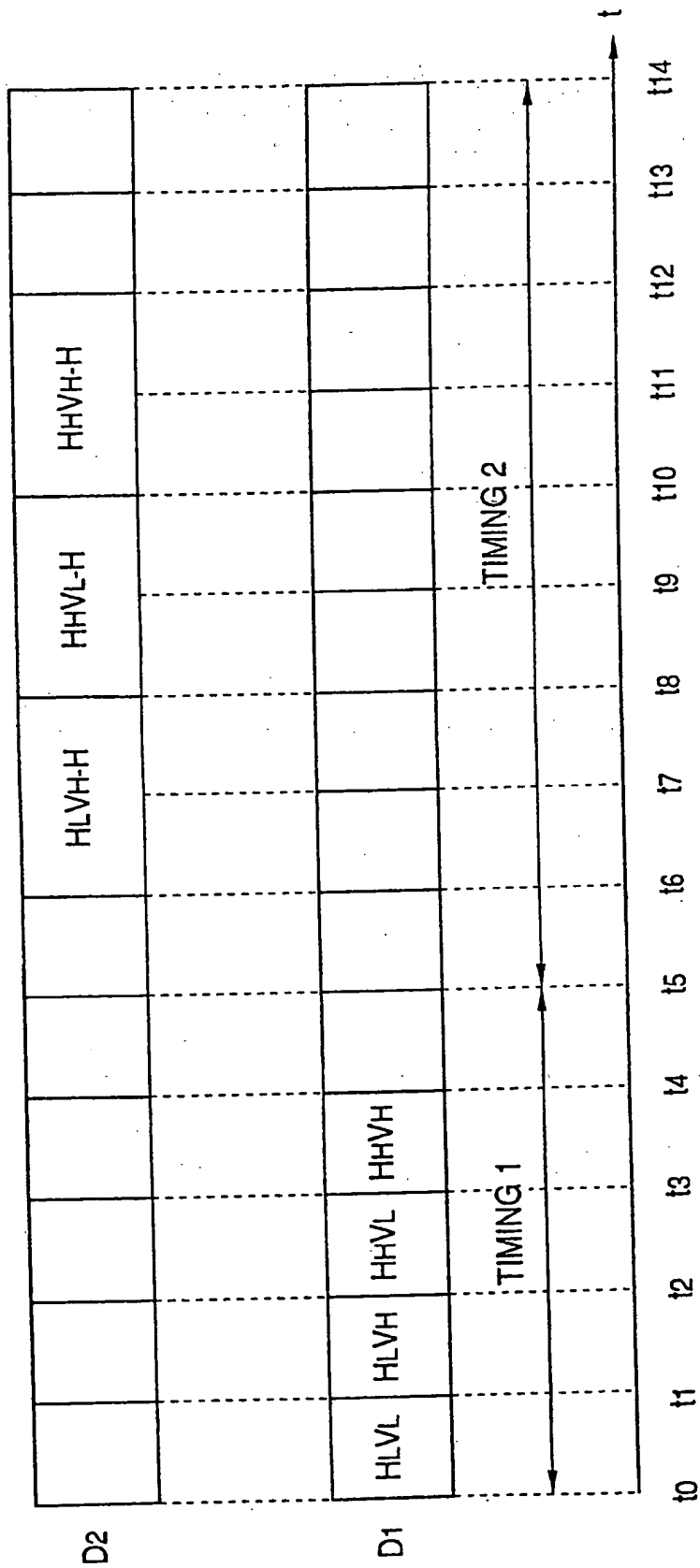


FIG. 74(a)

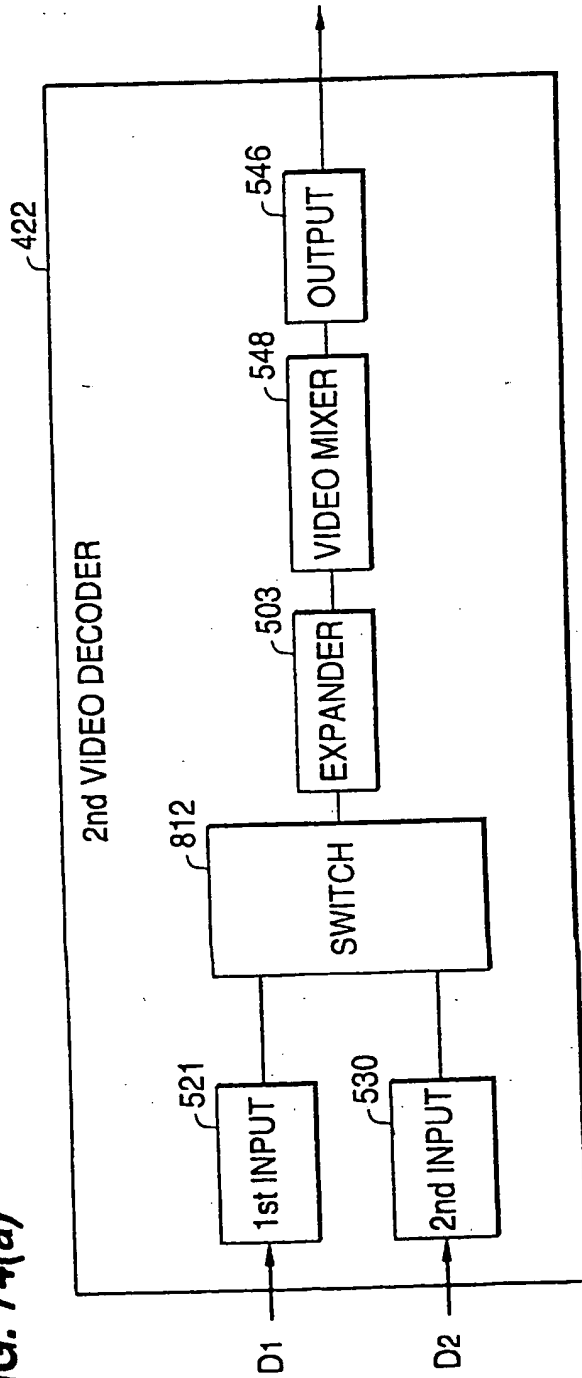


FIG. 74(b)

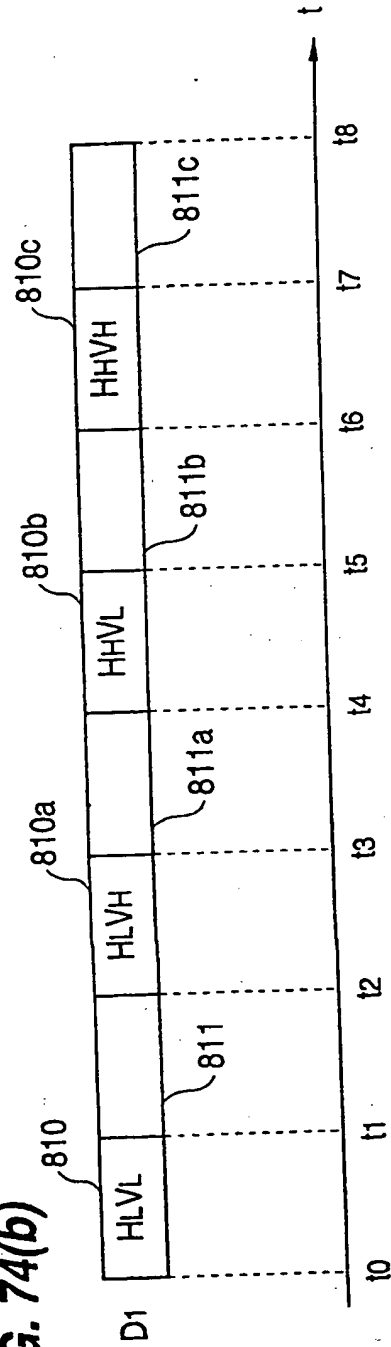


FIG. 75

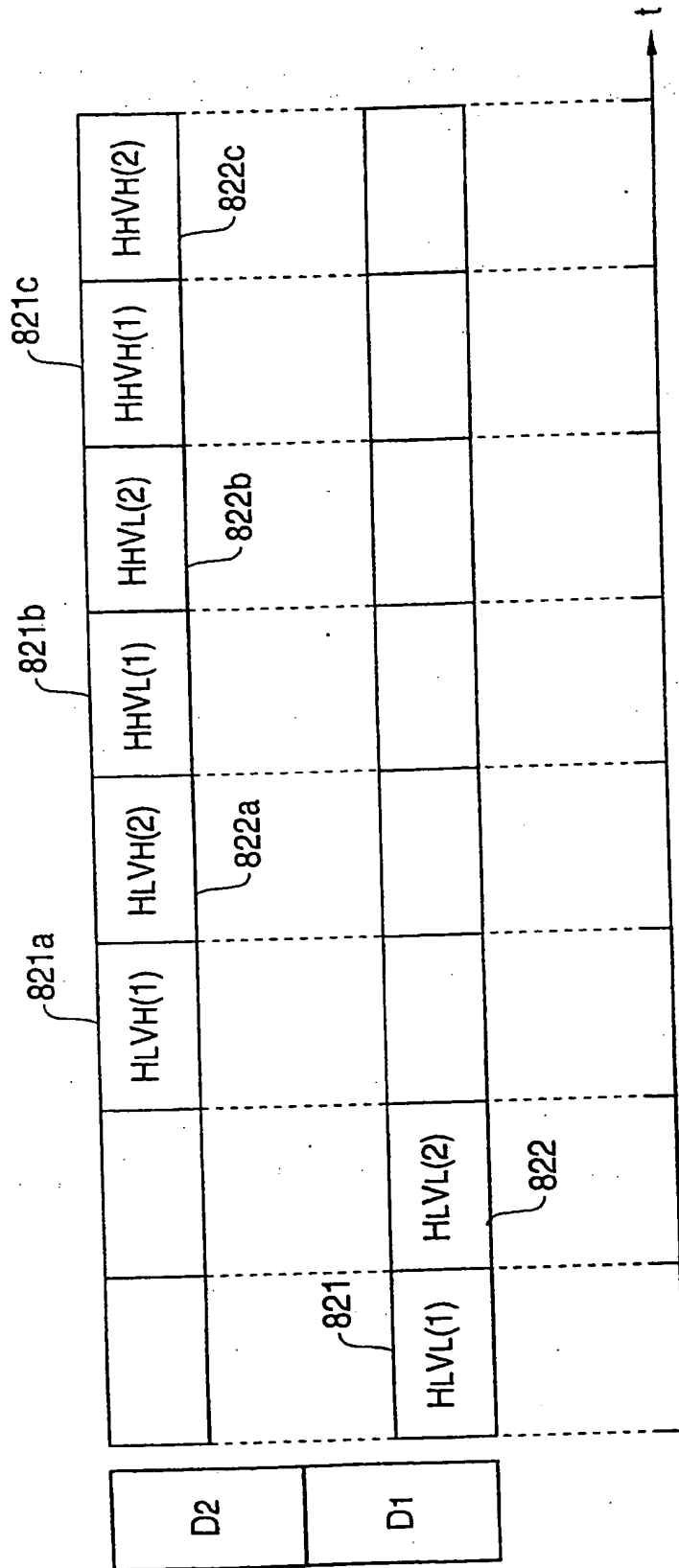


FIG. 77

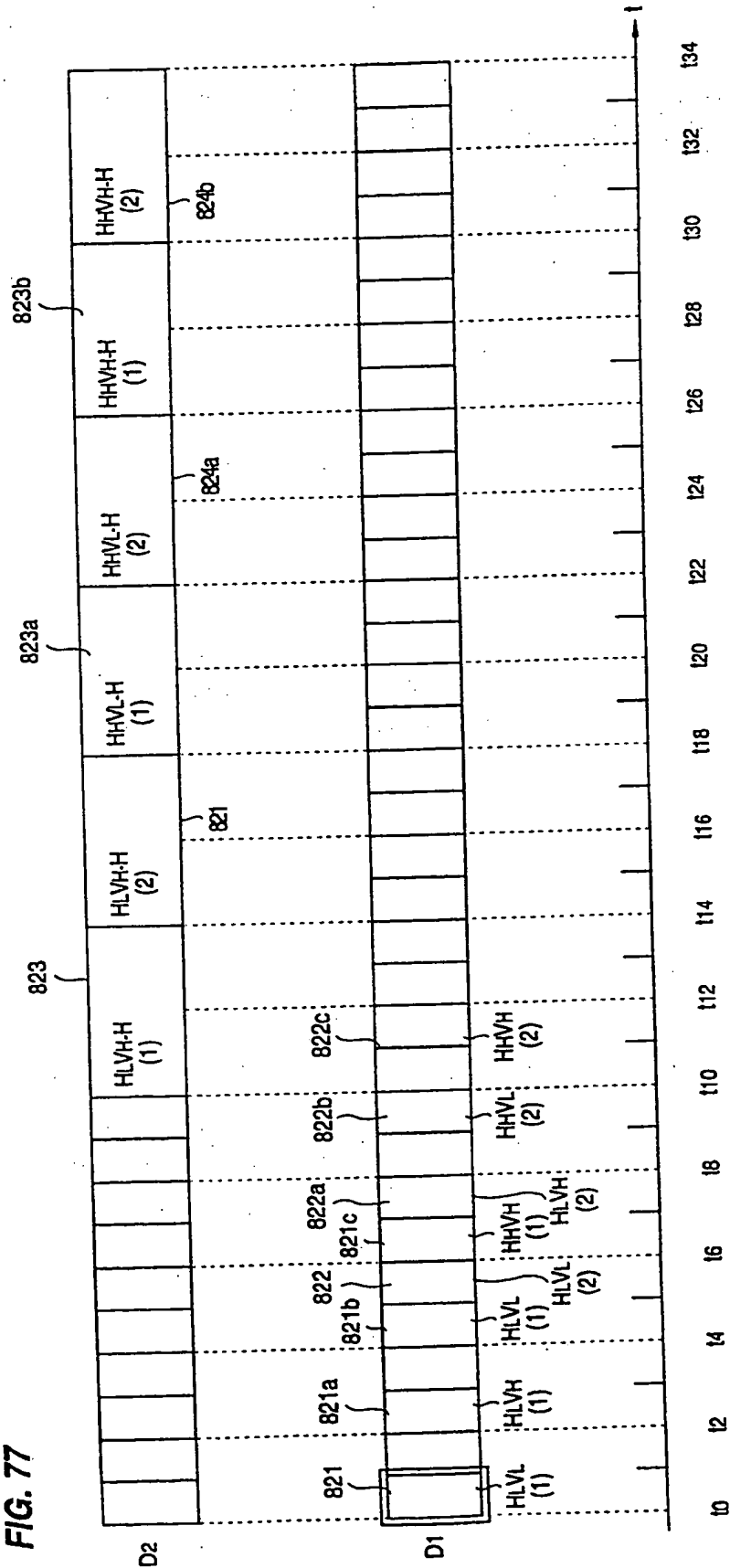


FIG. 78

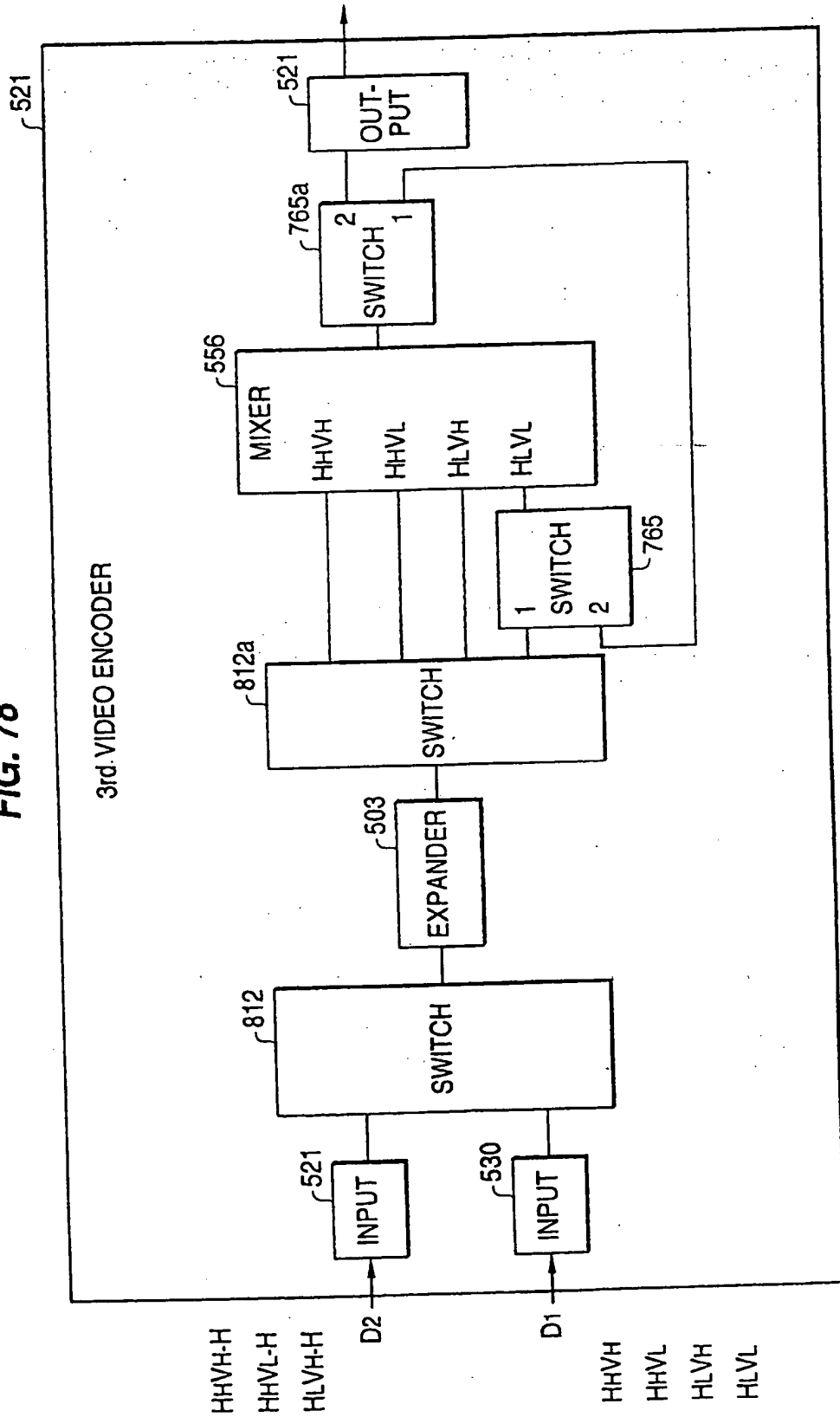


FIG. 79

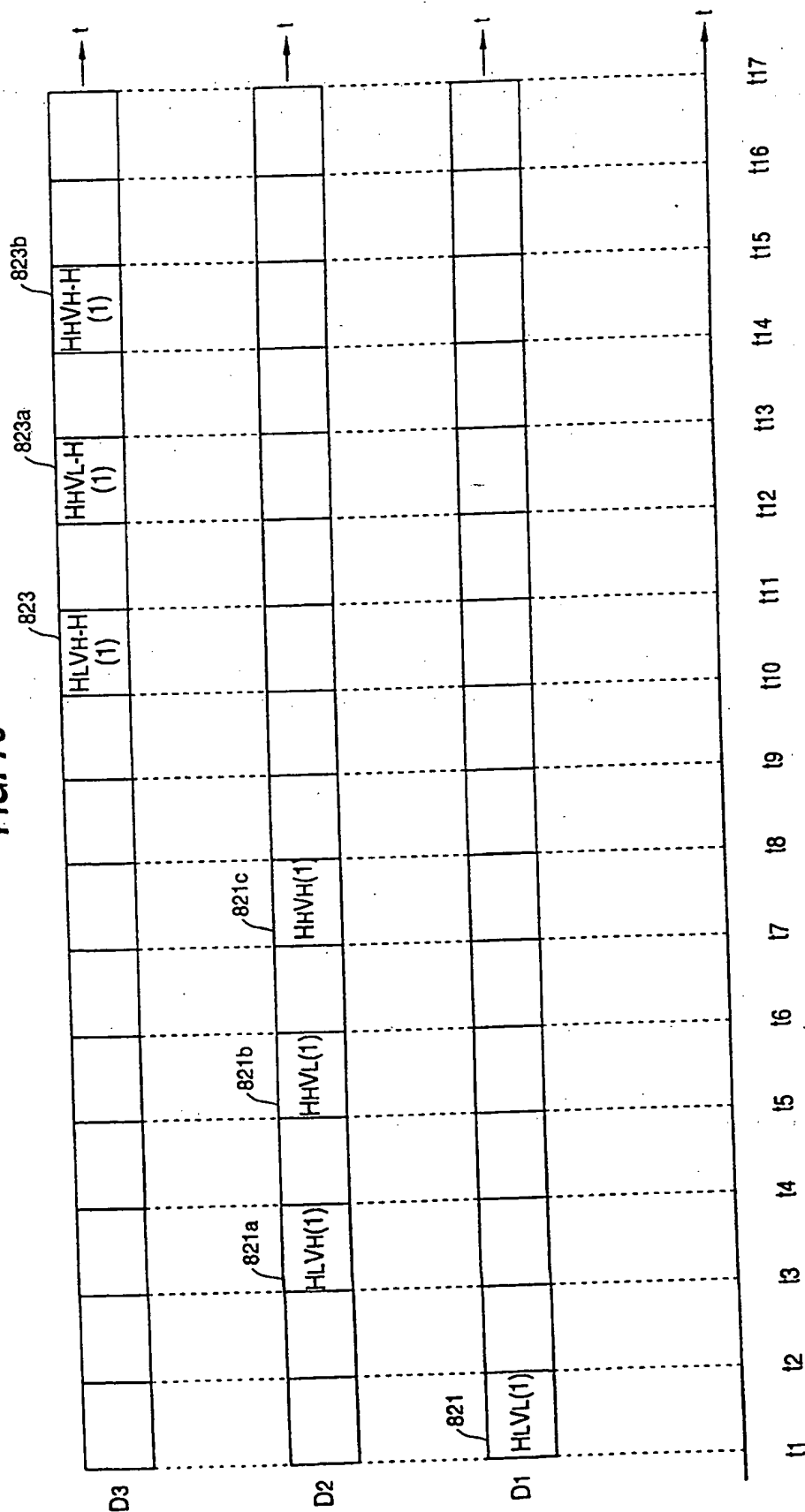


FIG. 80

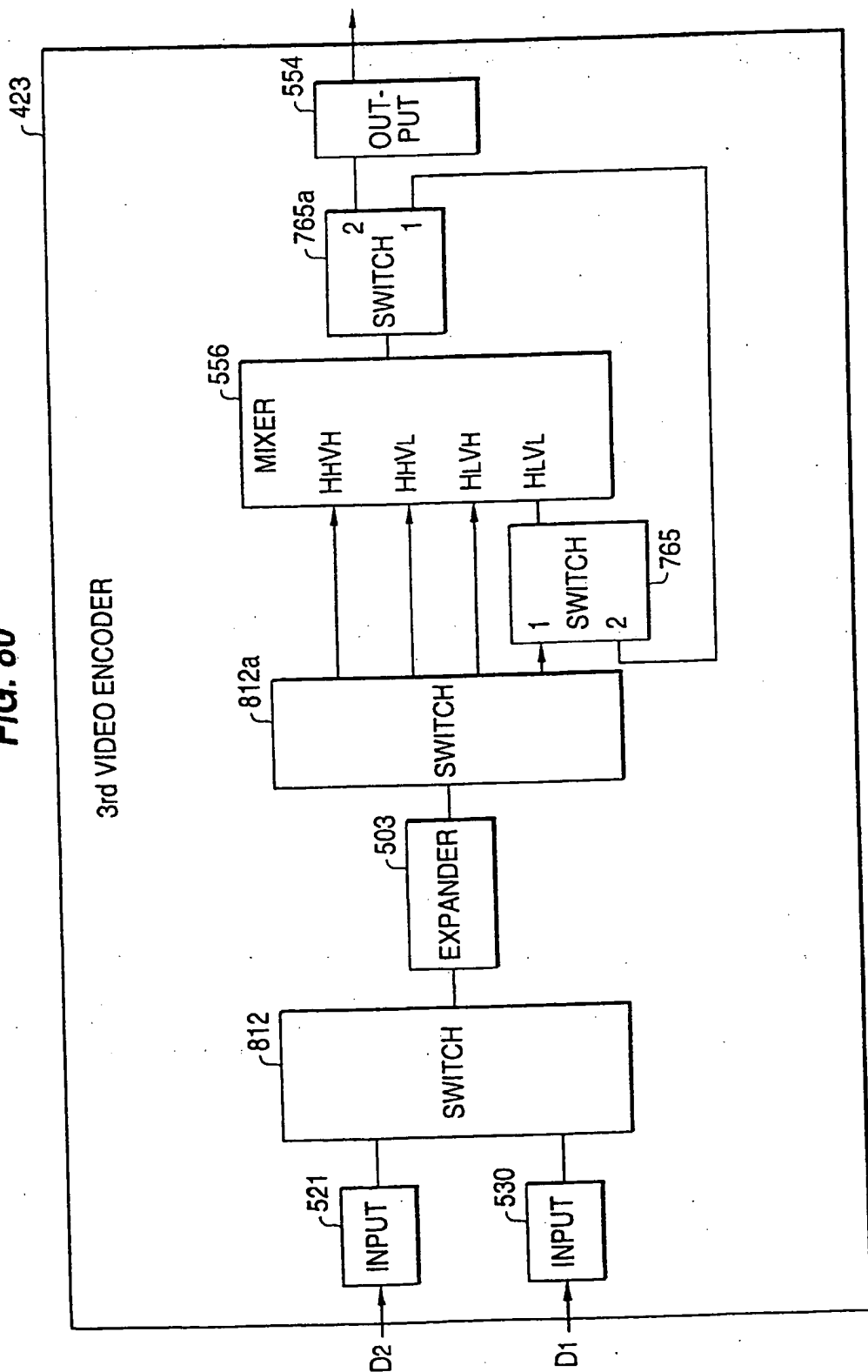


FIG. 81

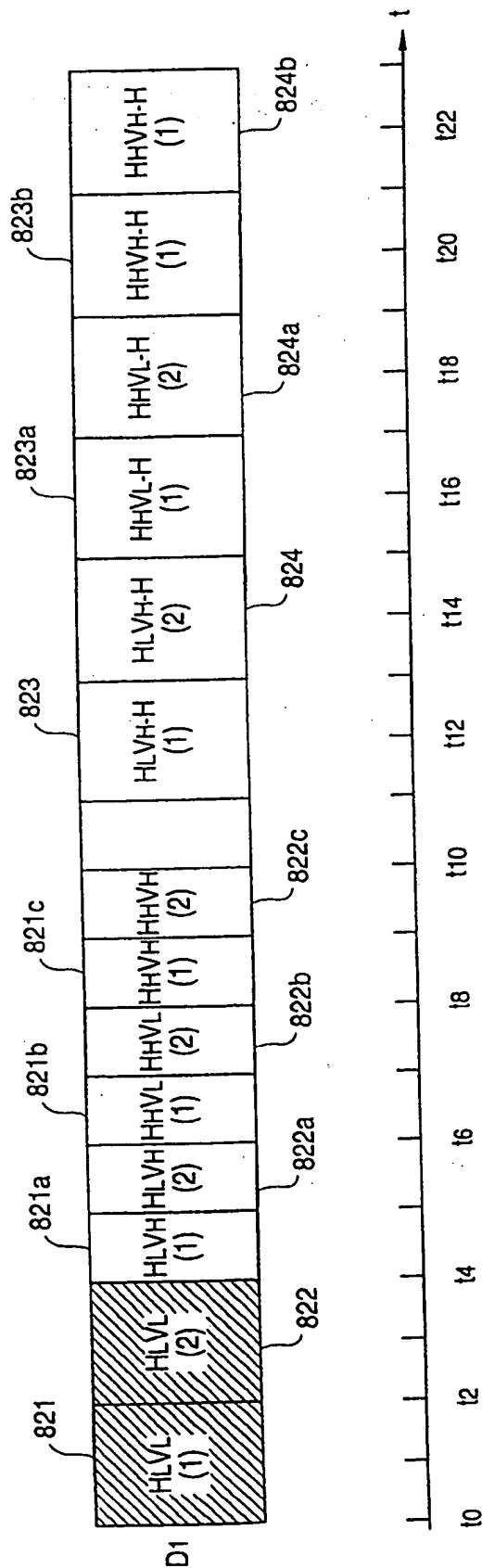


FIG. 82

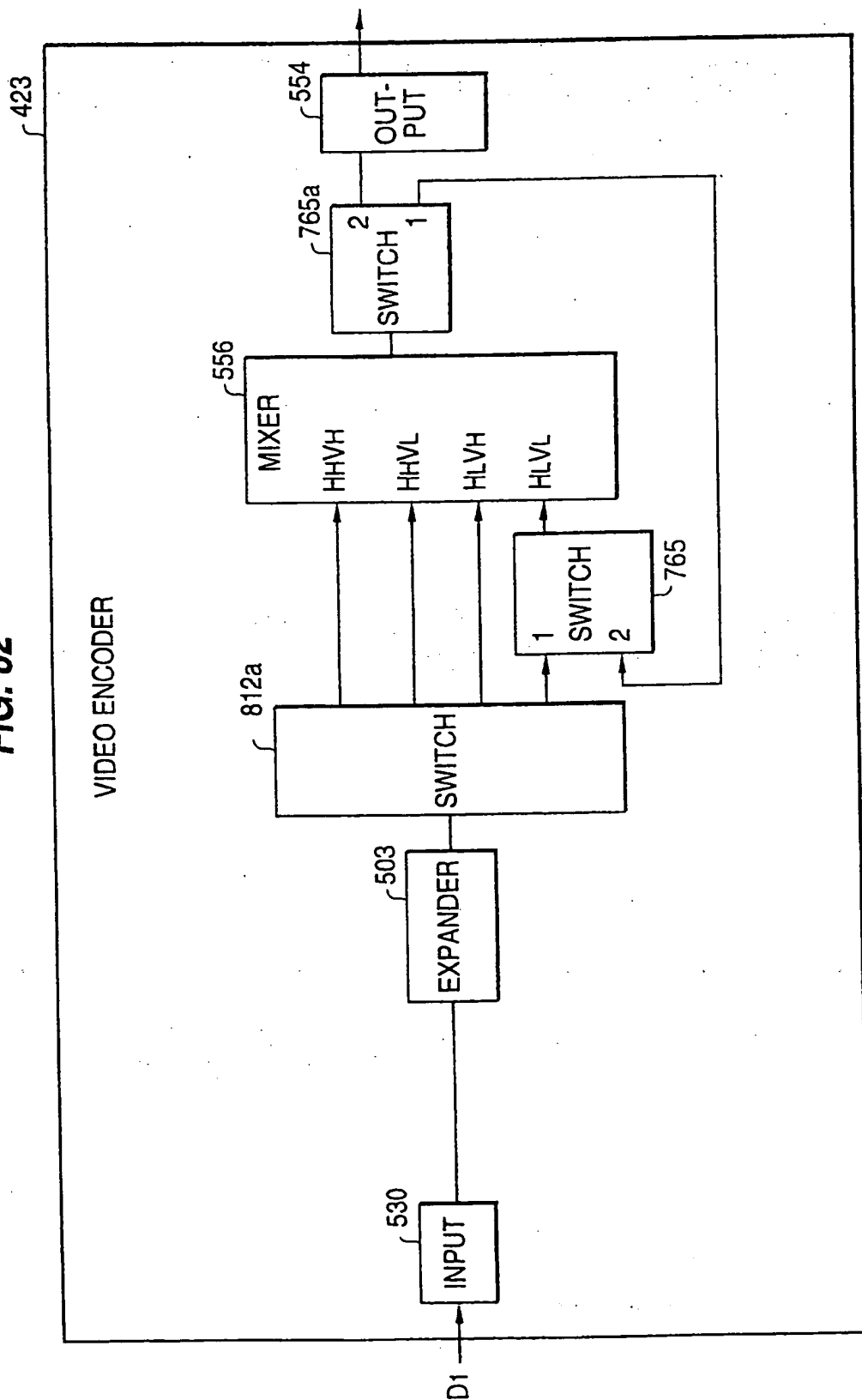


FIG. 84

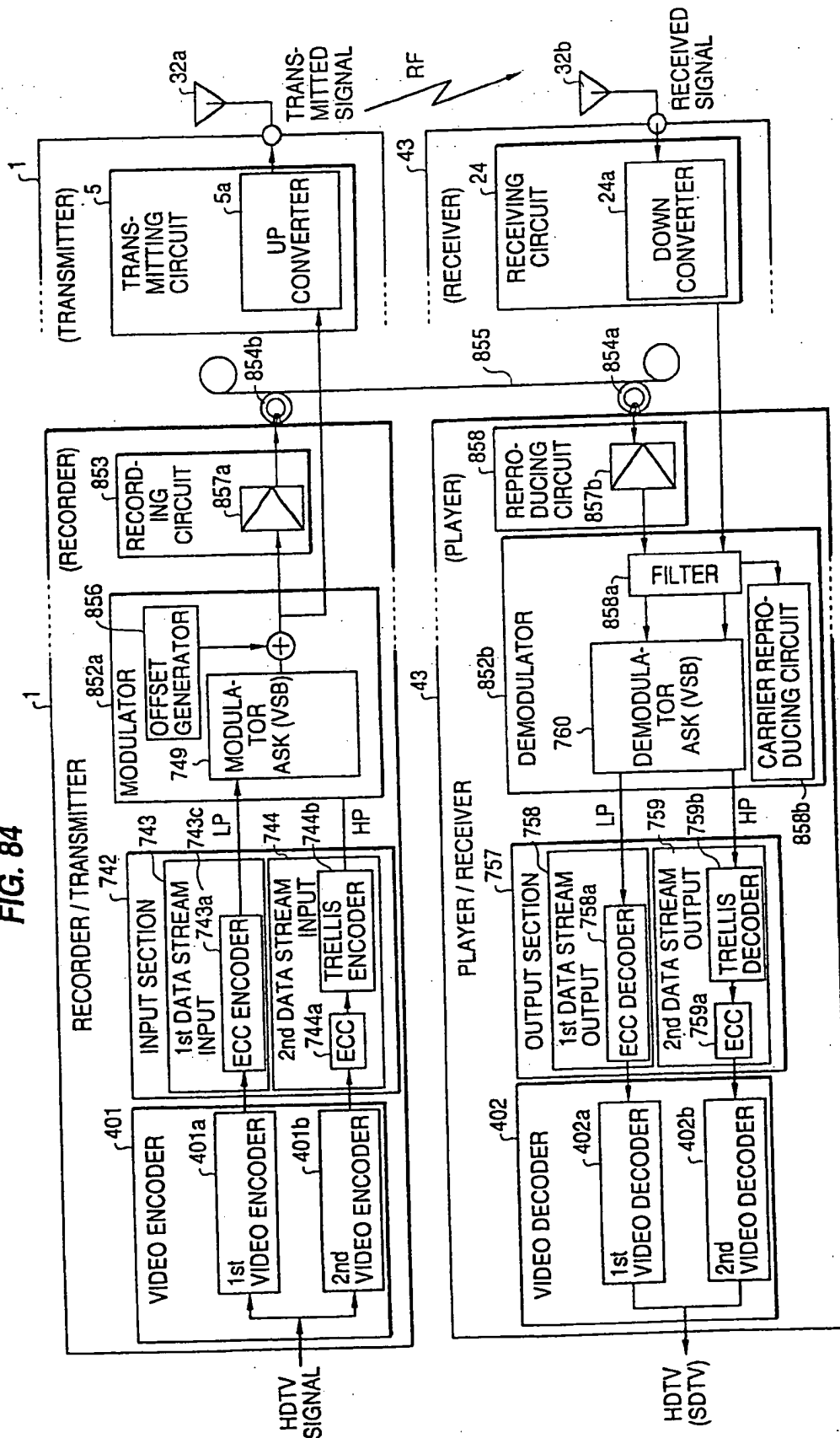


FIG. 85

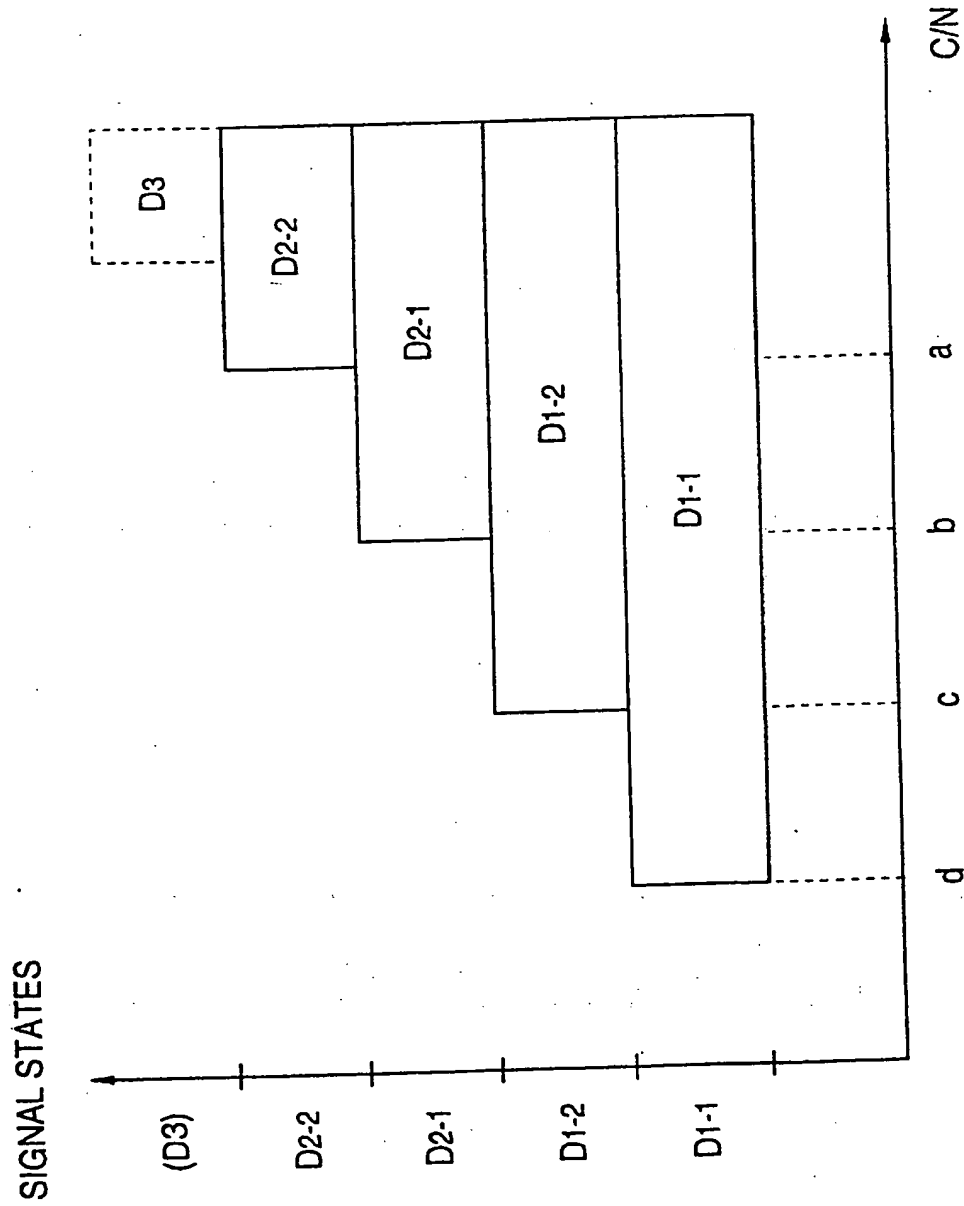


FIG. 86

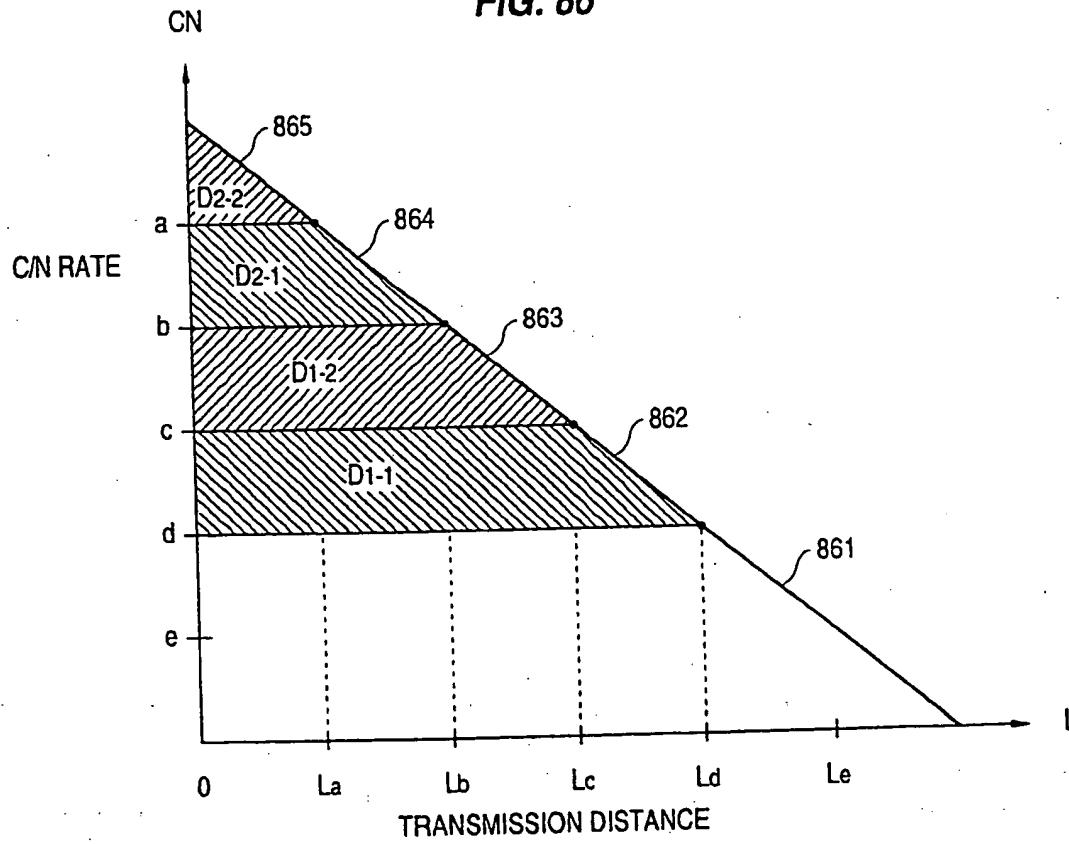


FIG. 87

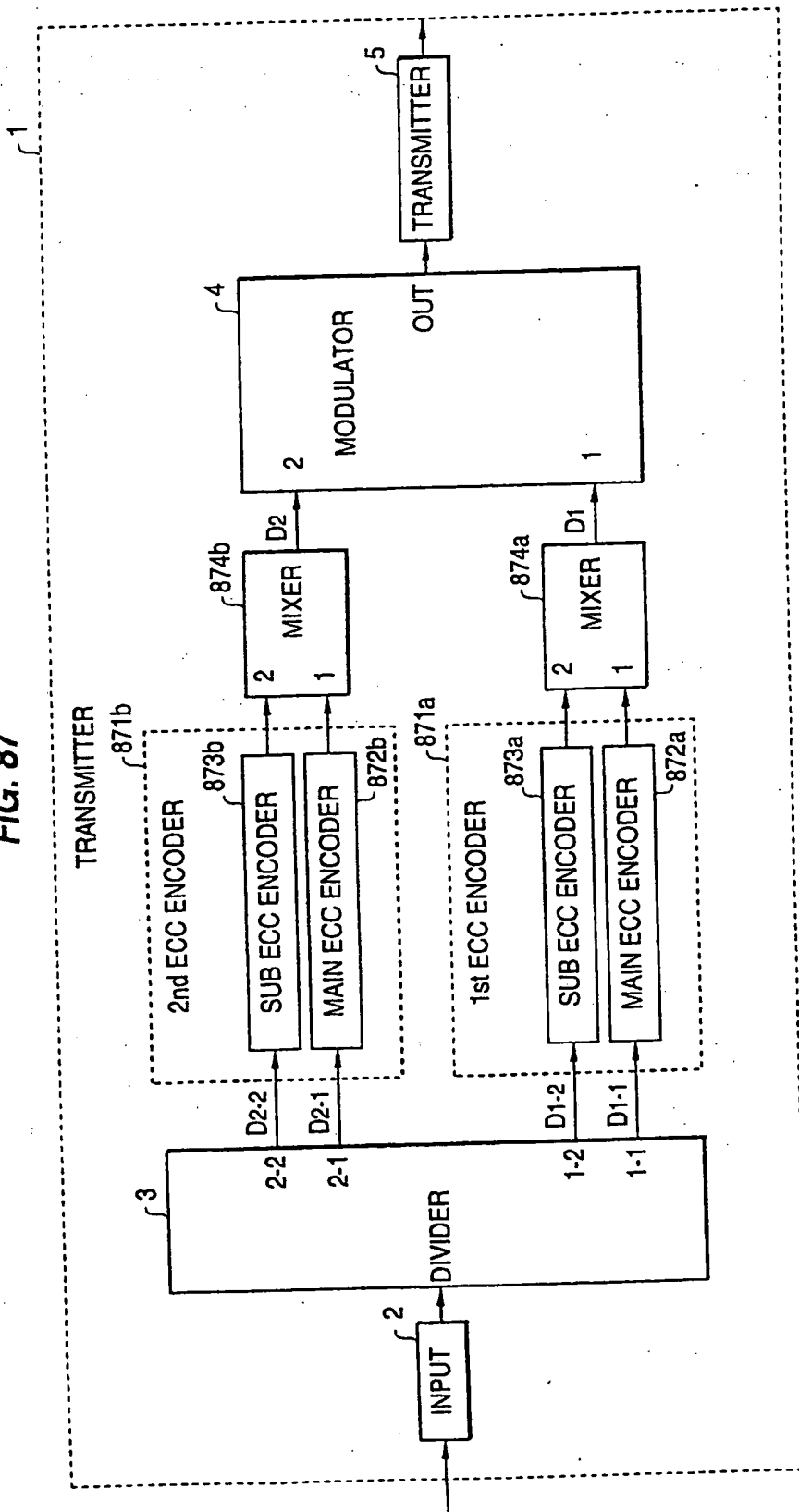


FIG. 88

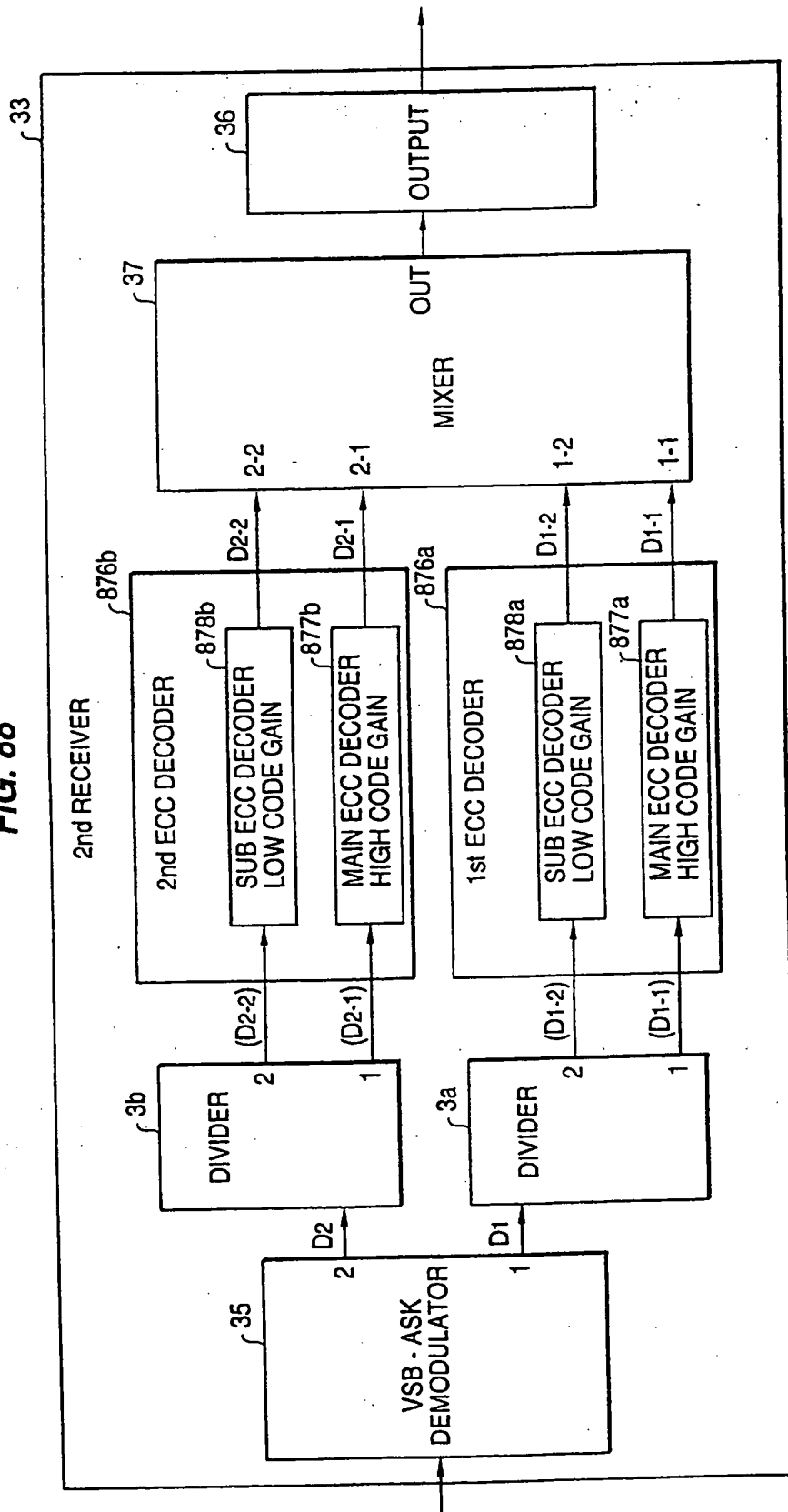


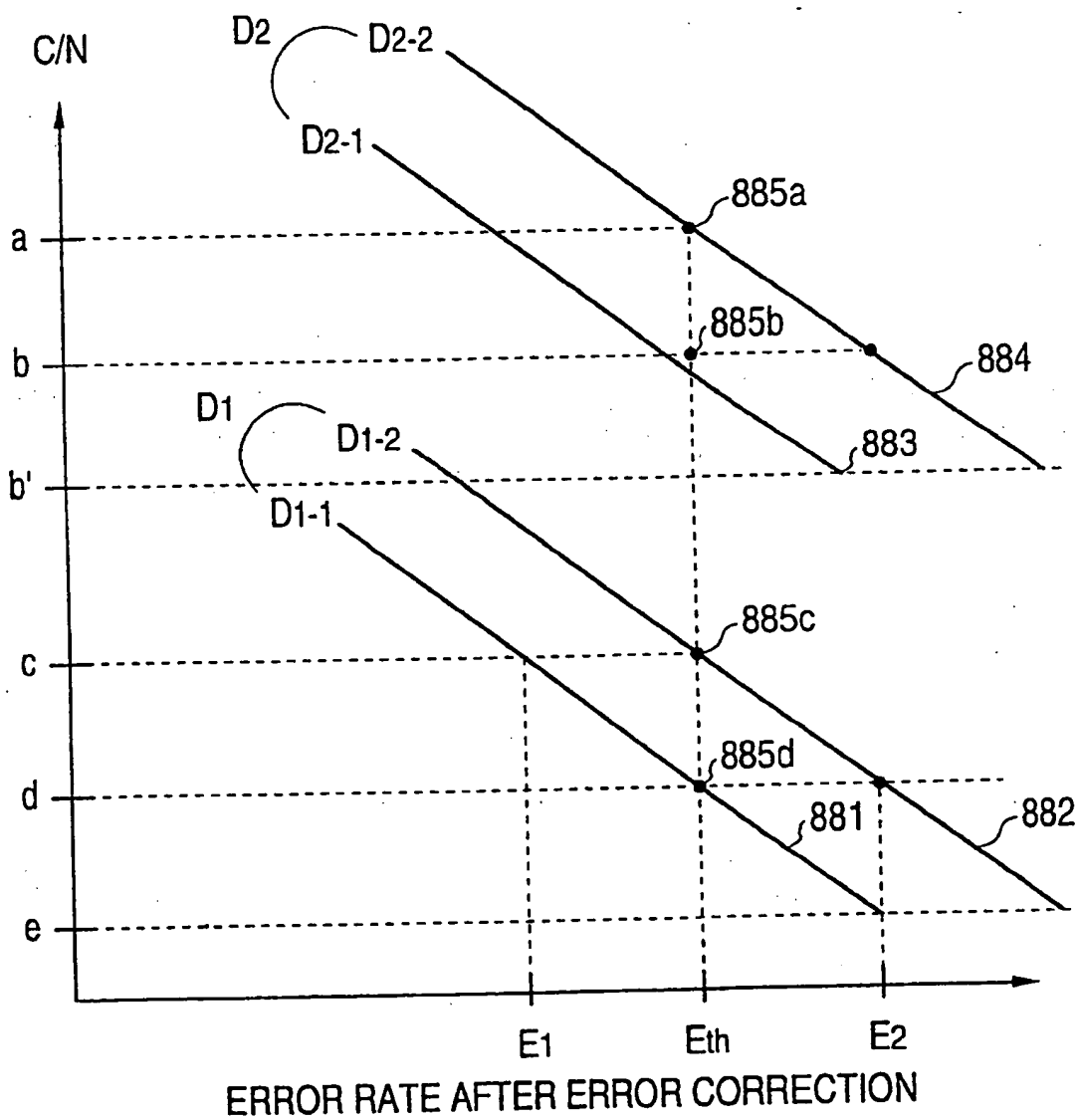
FIG. 89

FIG. 90

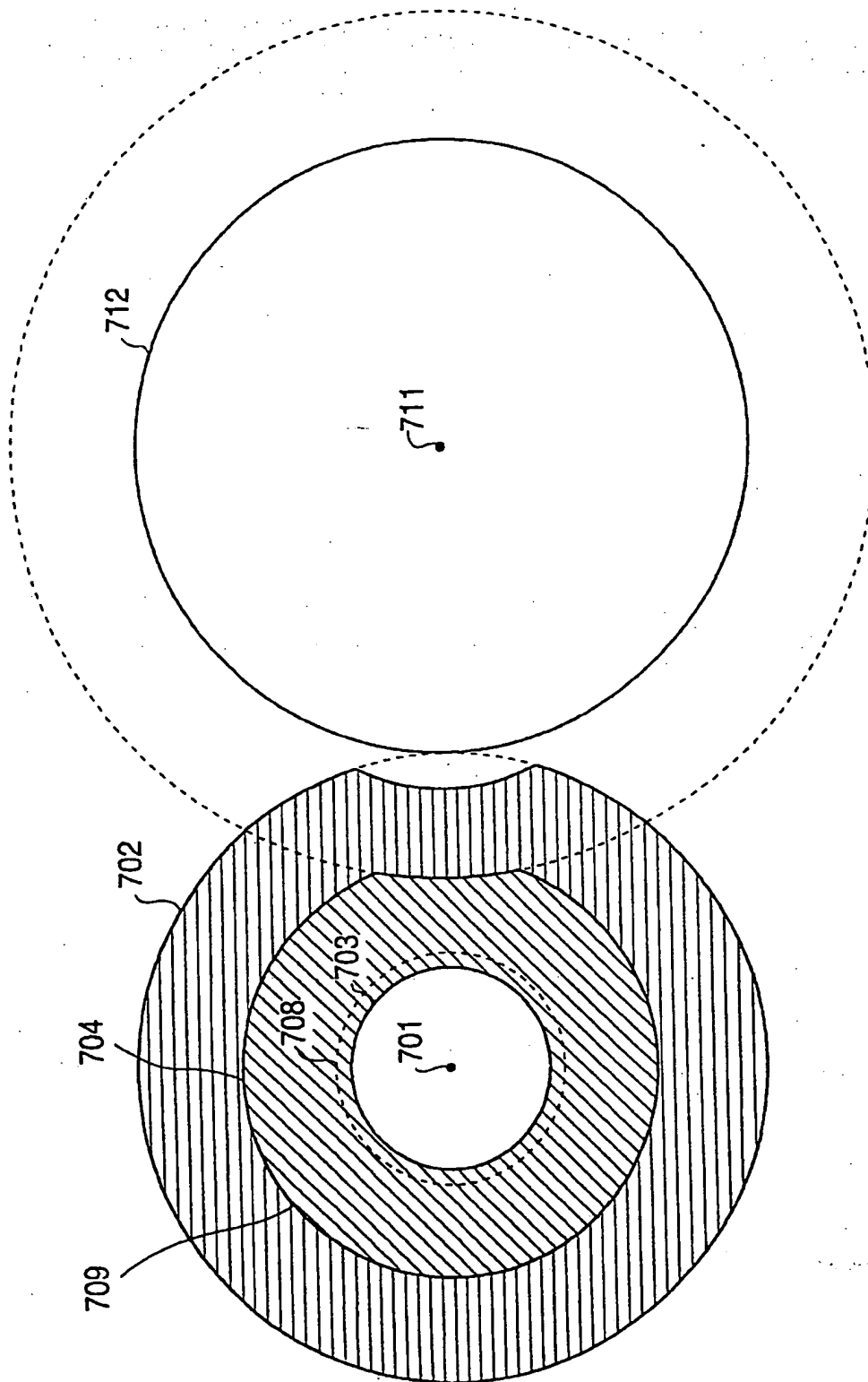


FIG. 91

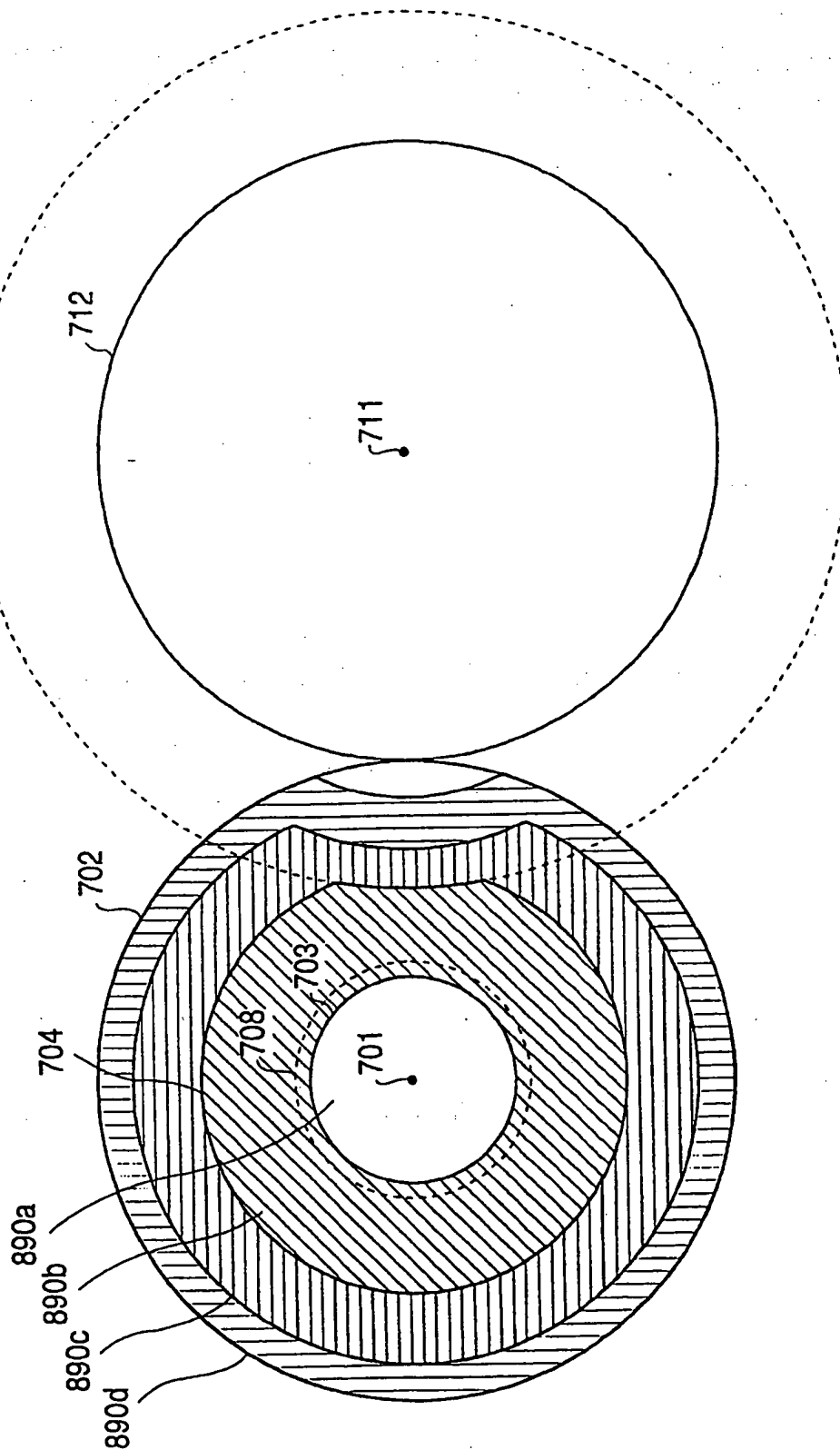


FIG. 92

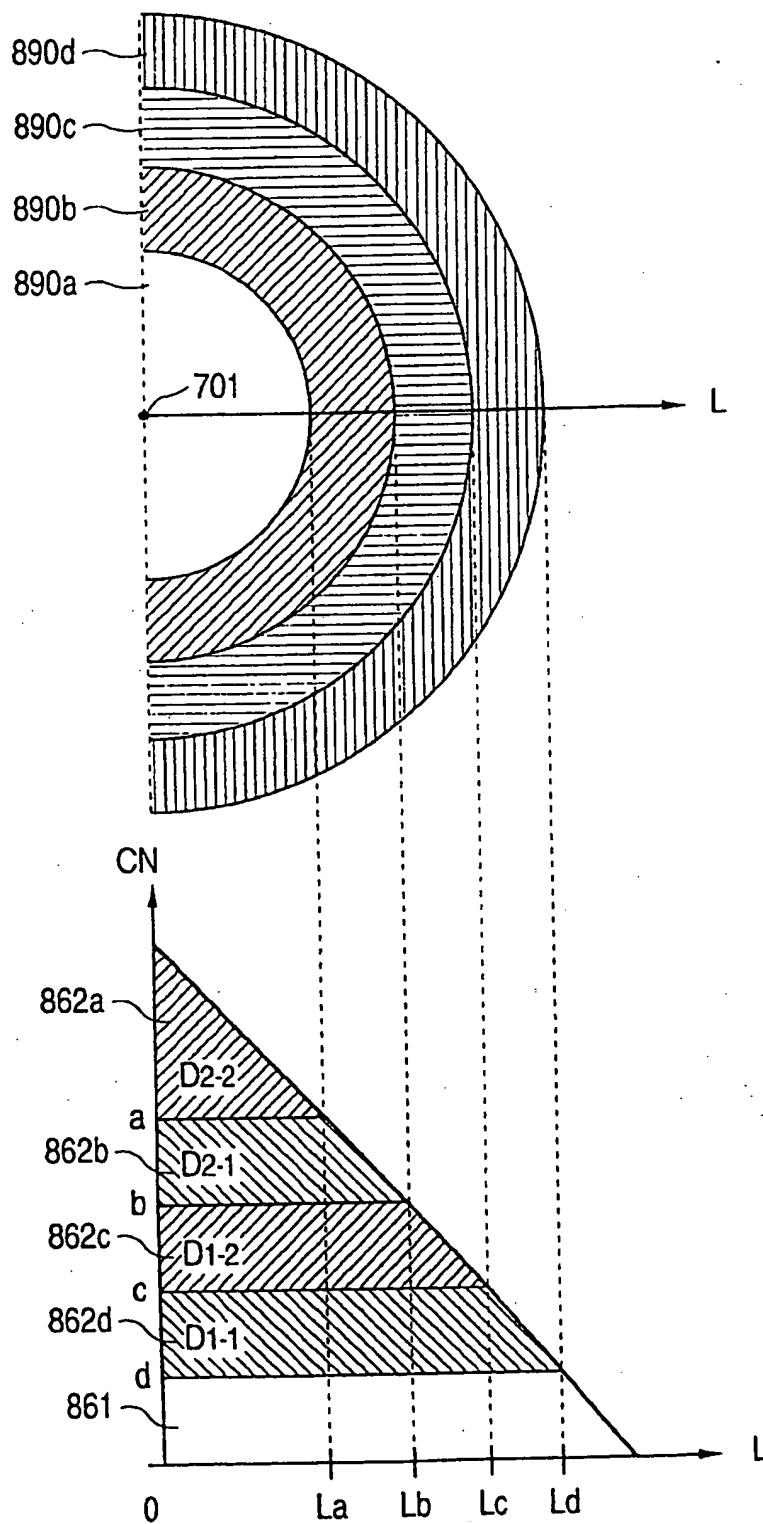


FIG. 93

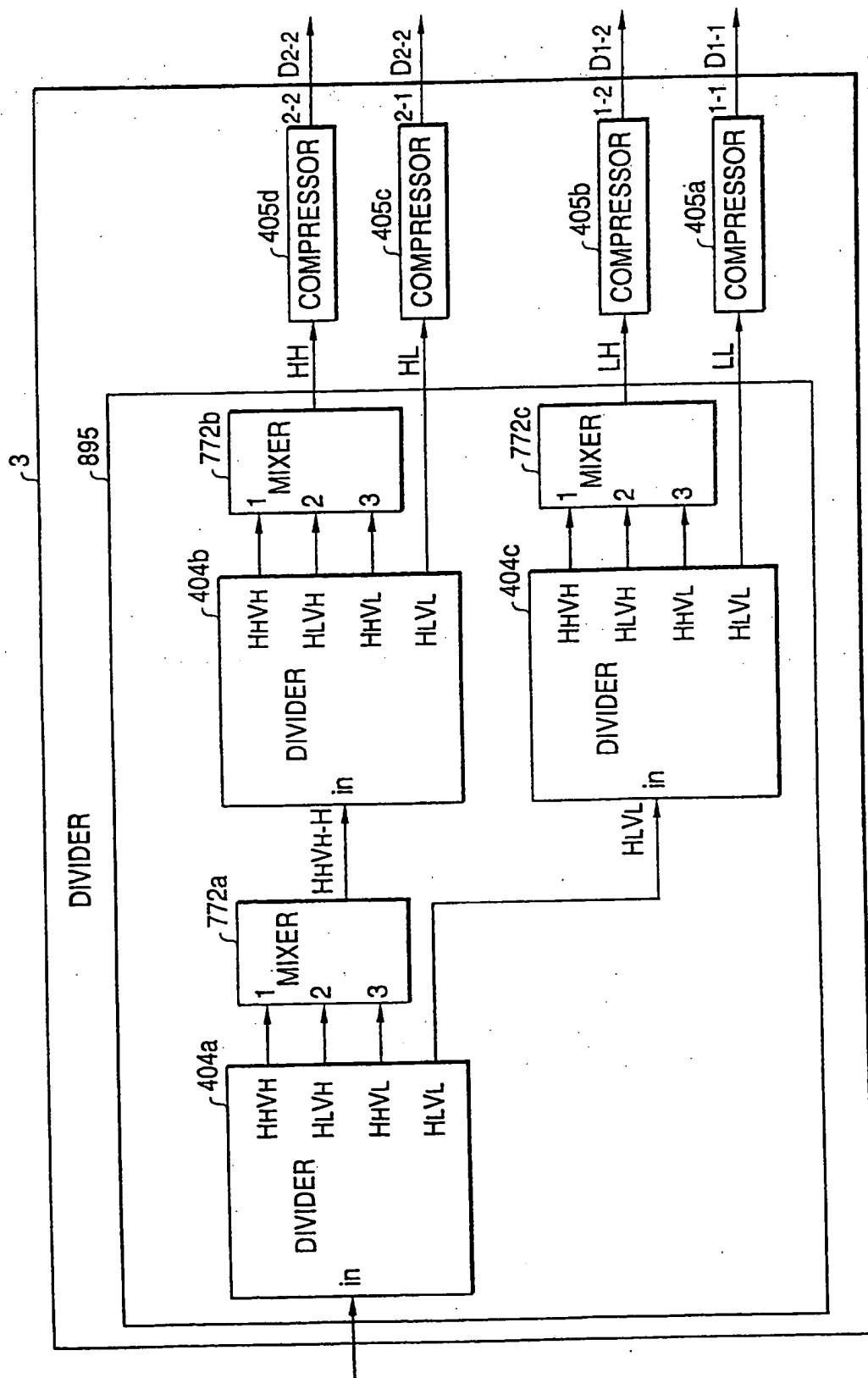


FIG. 94

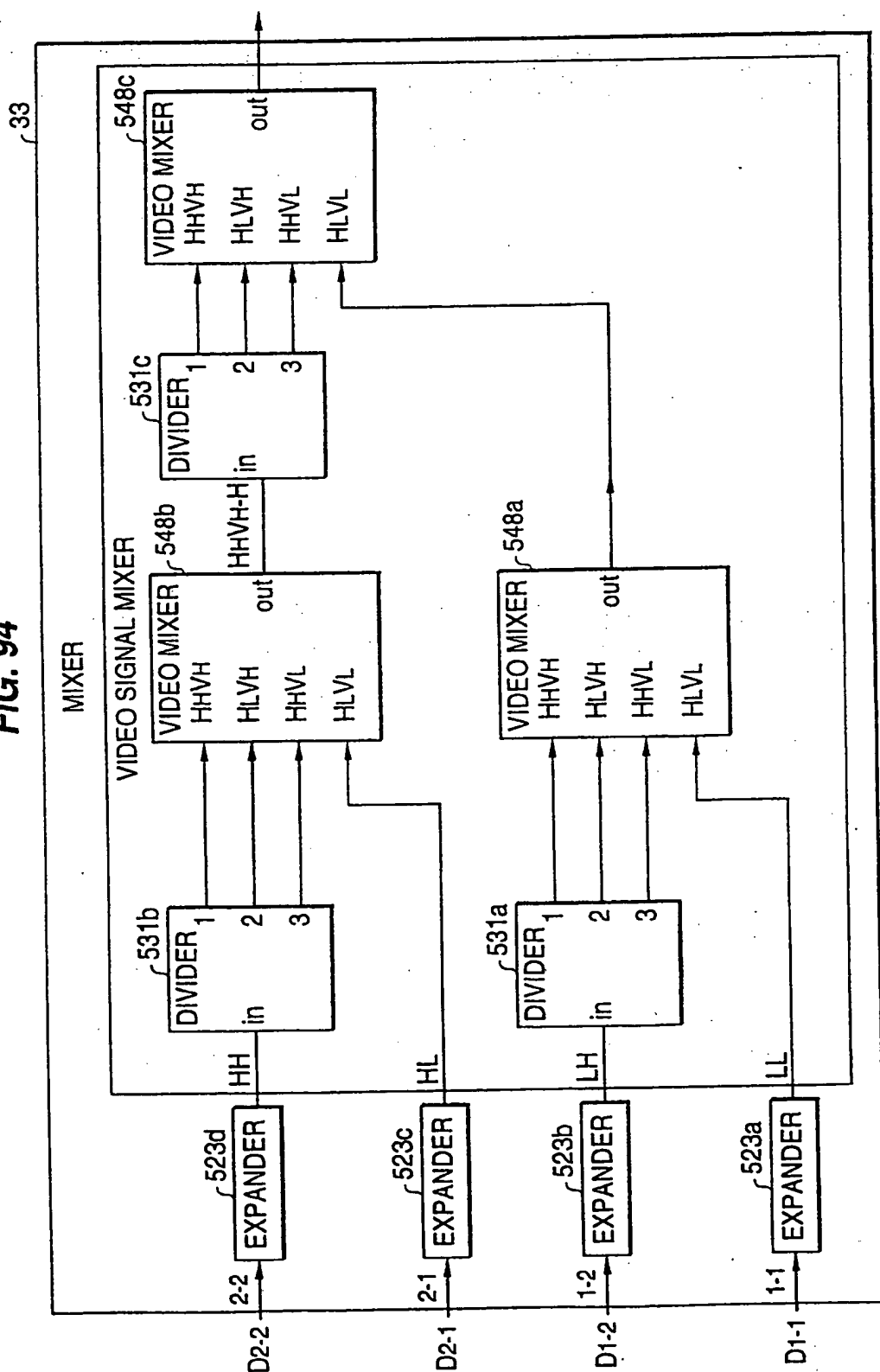


FIG. 95

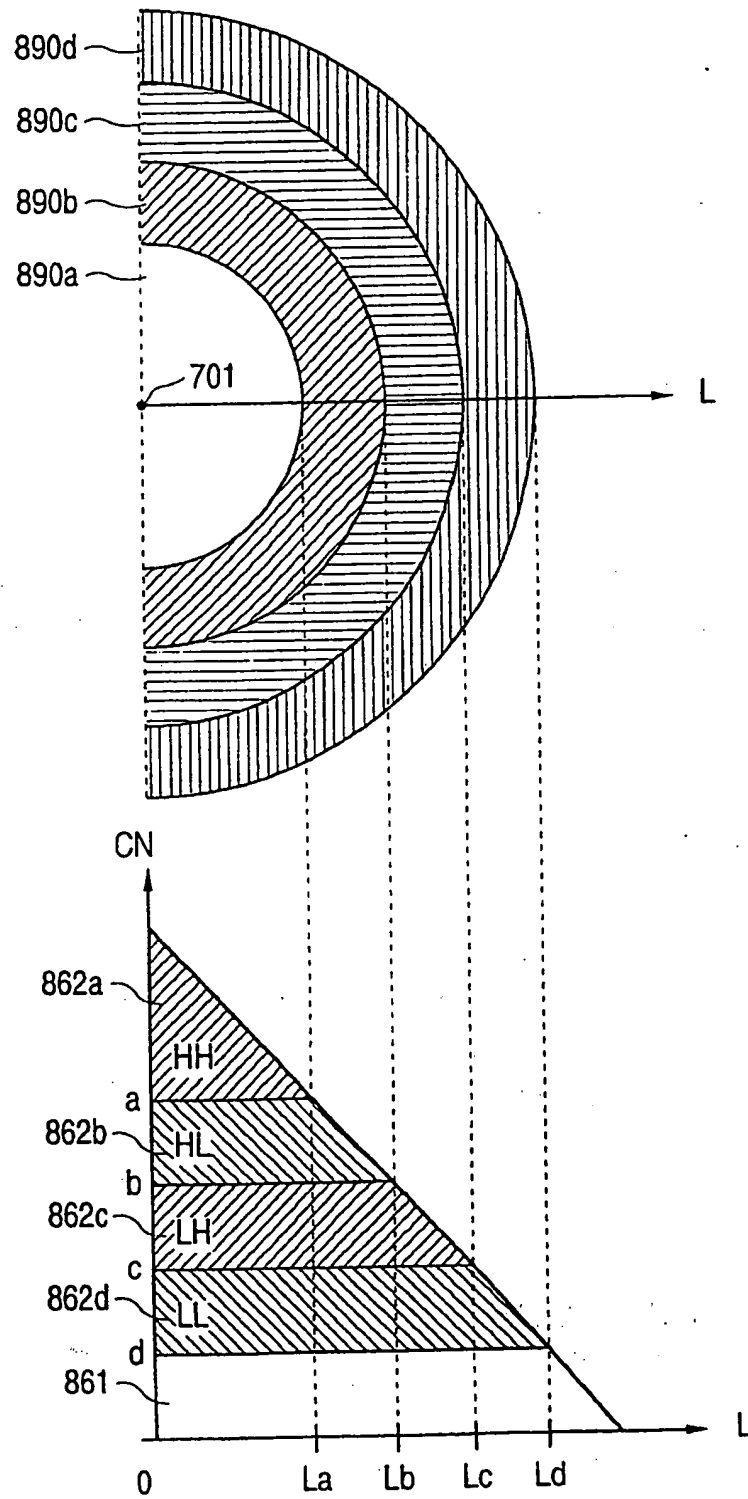


FIG. 96

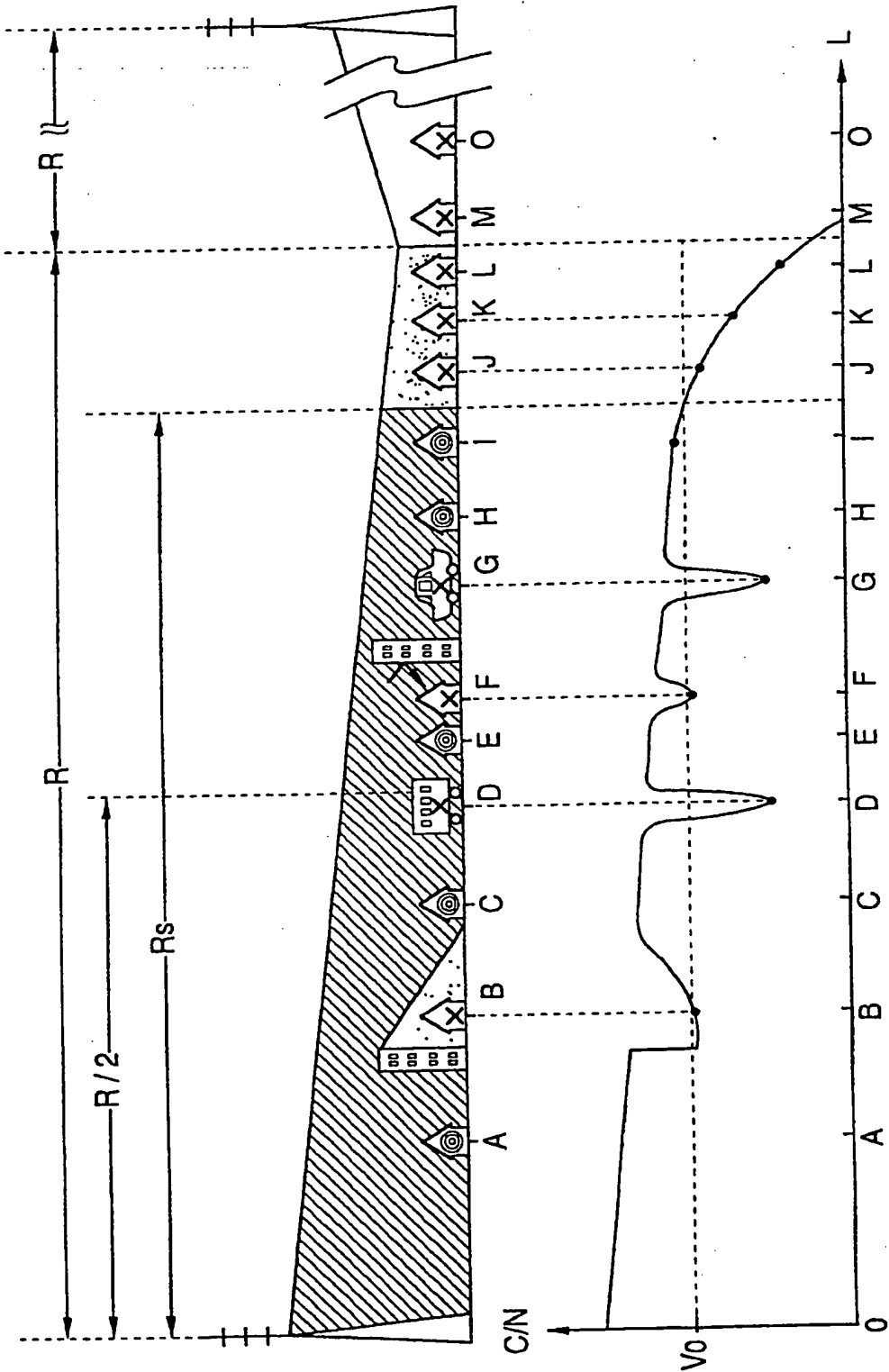


FIG. 97

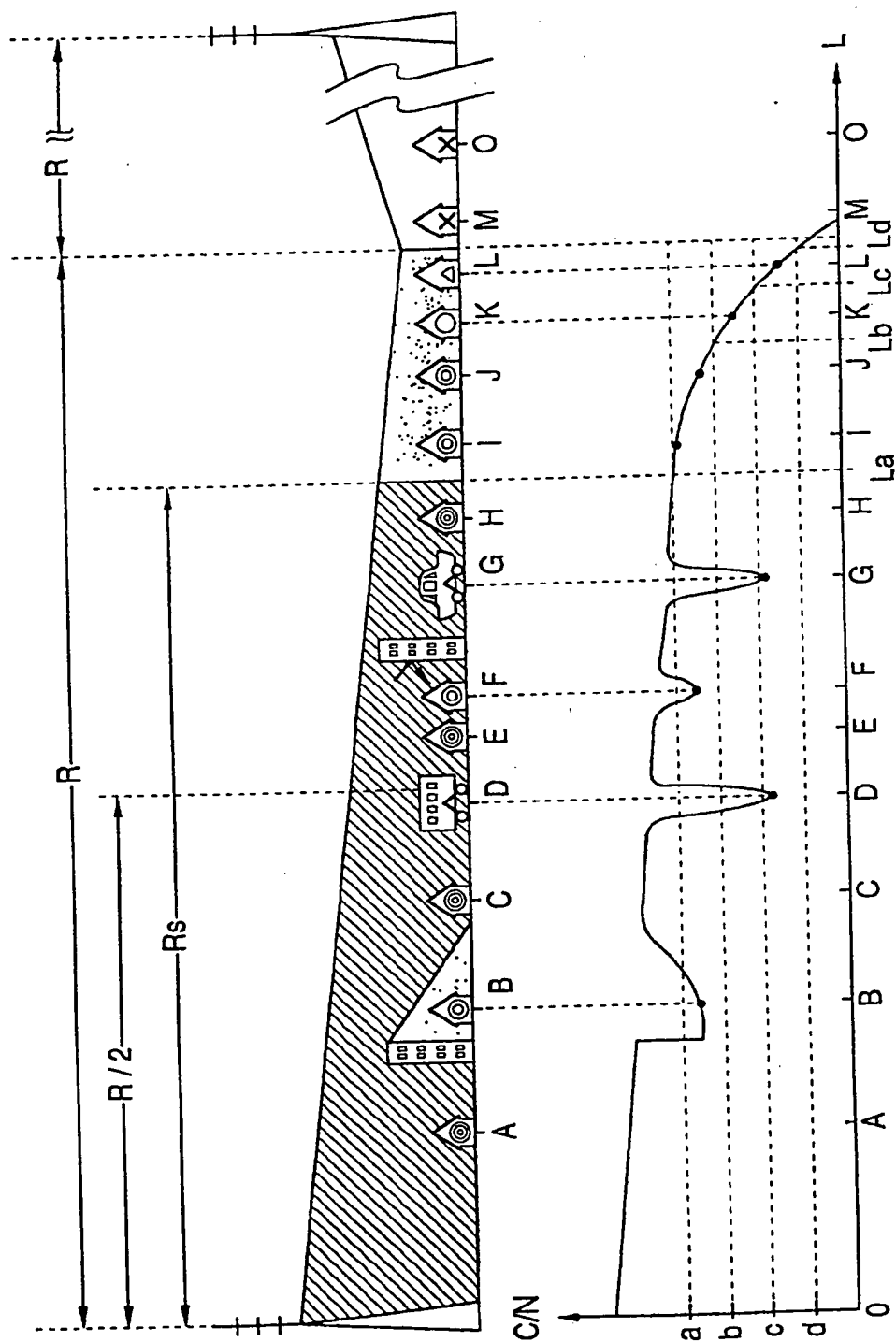


FIG. 98

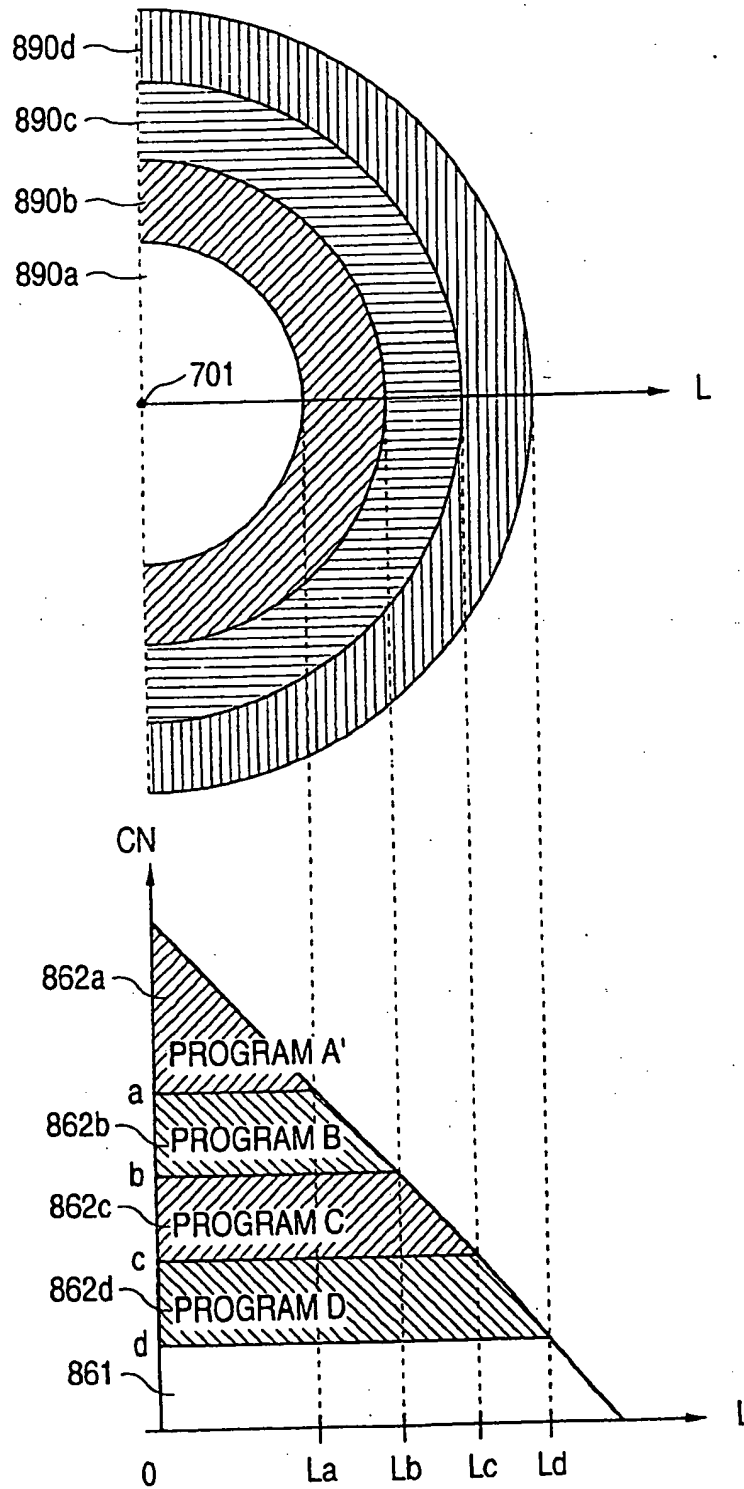


FIG. 99

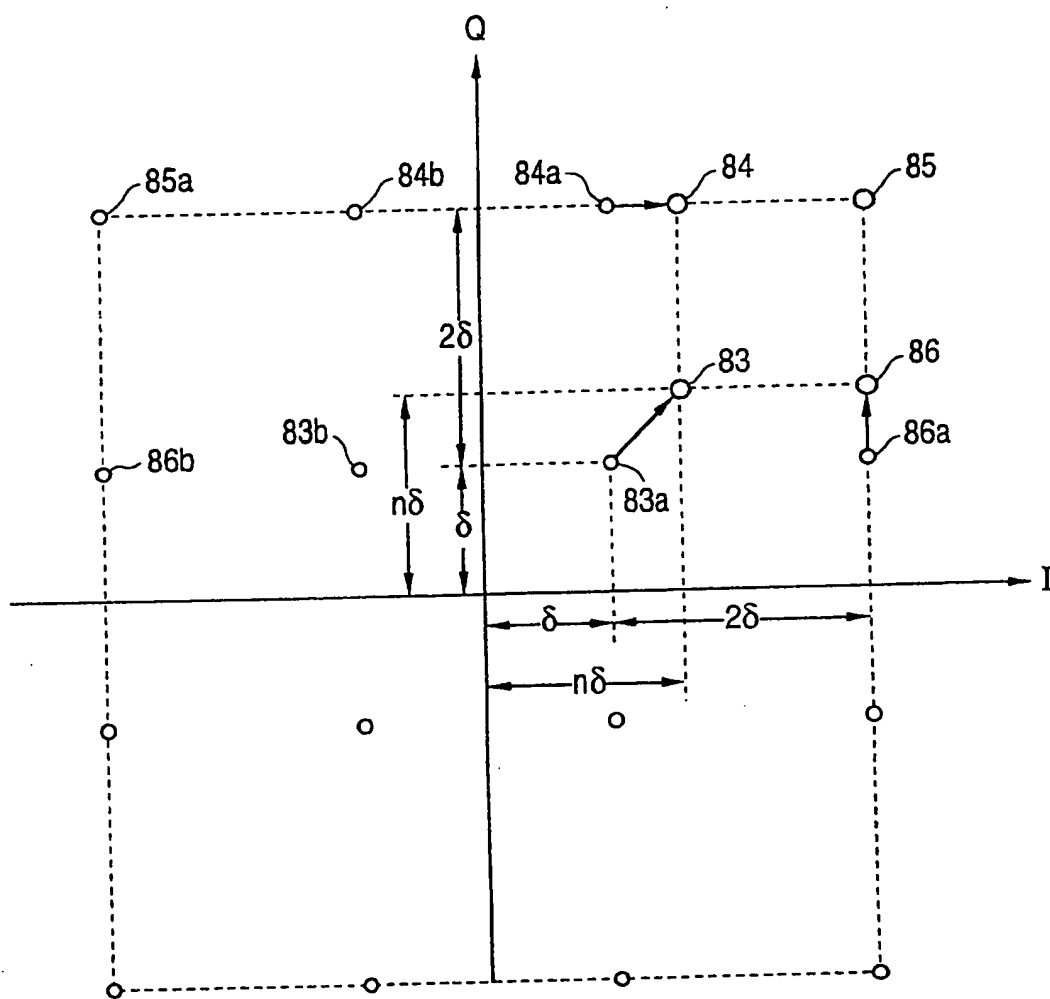


FIG. 100

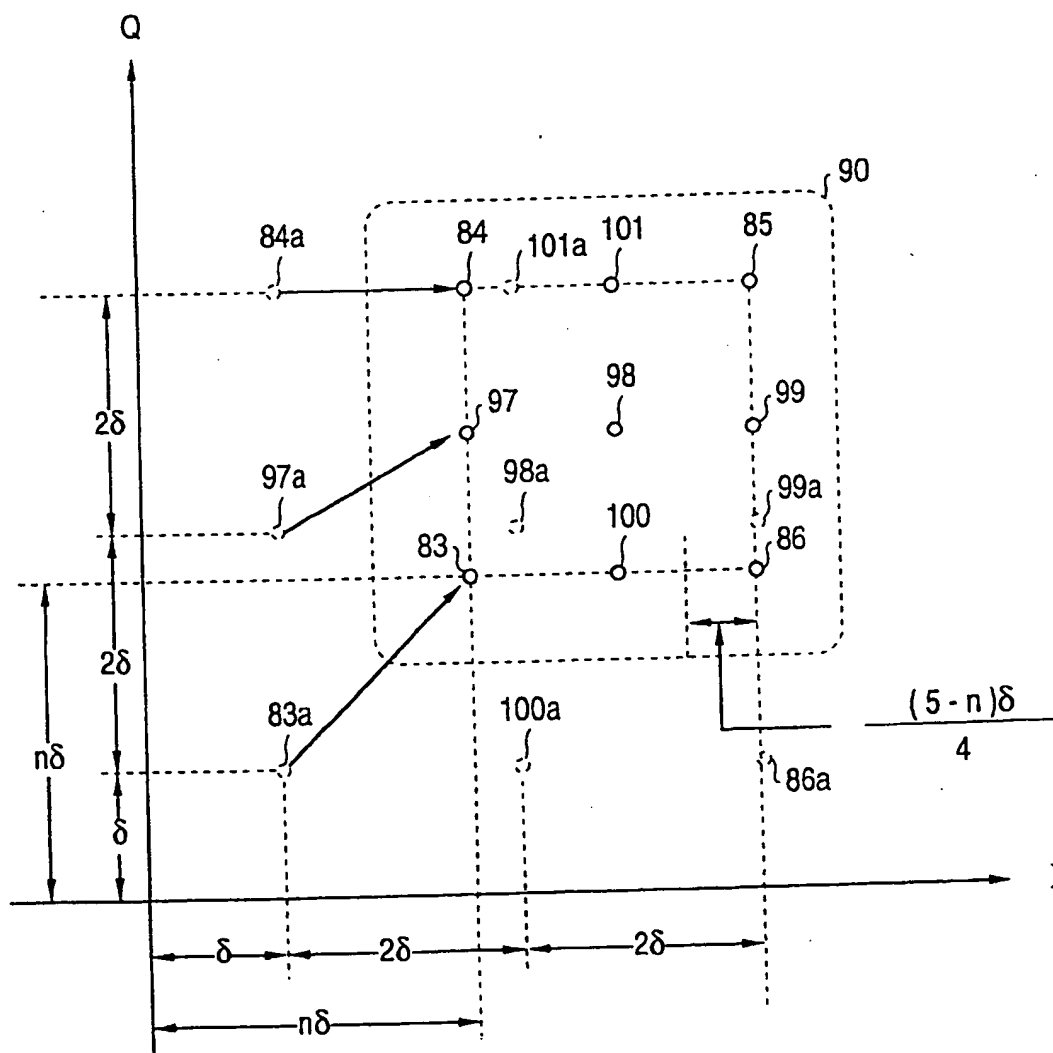
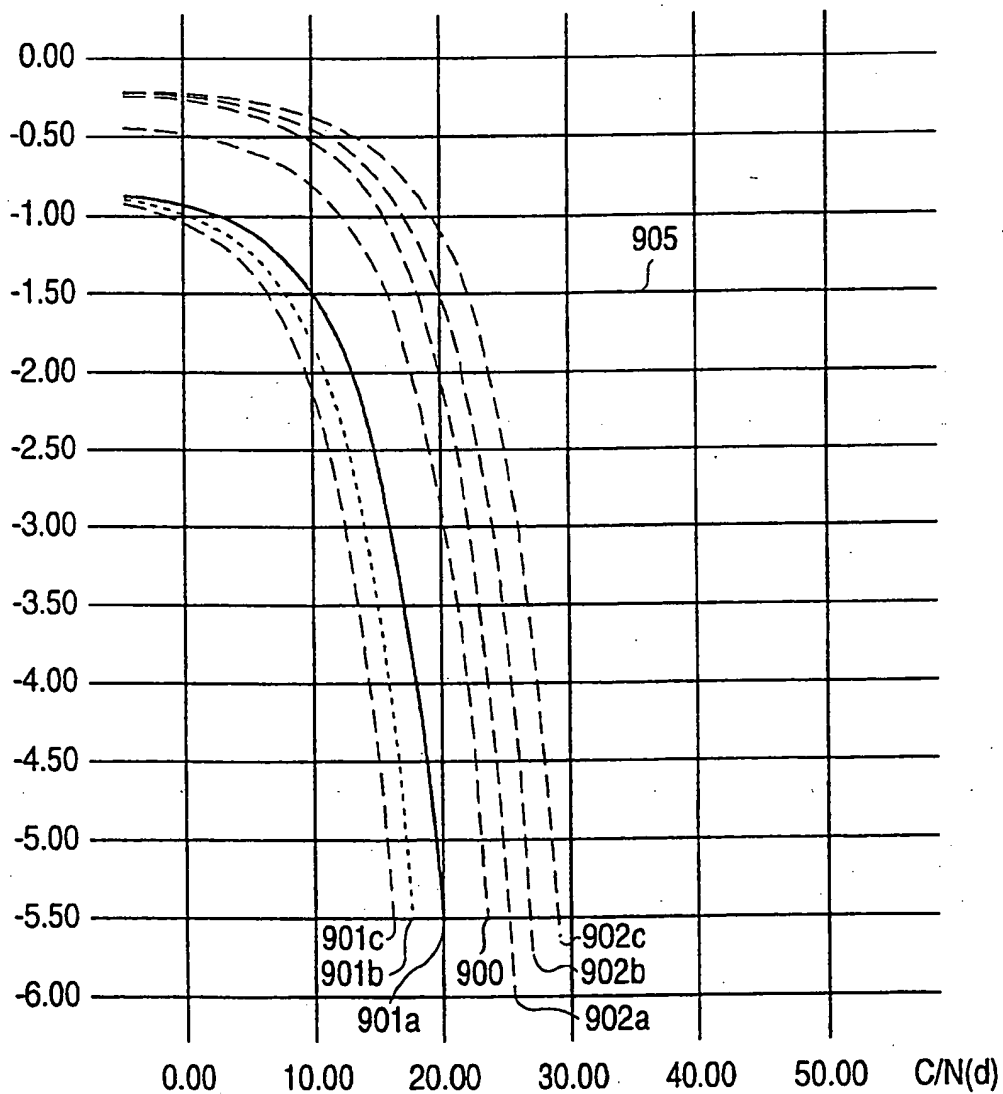


FIG. 101

Pe



Pe

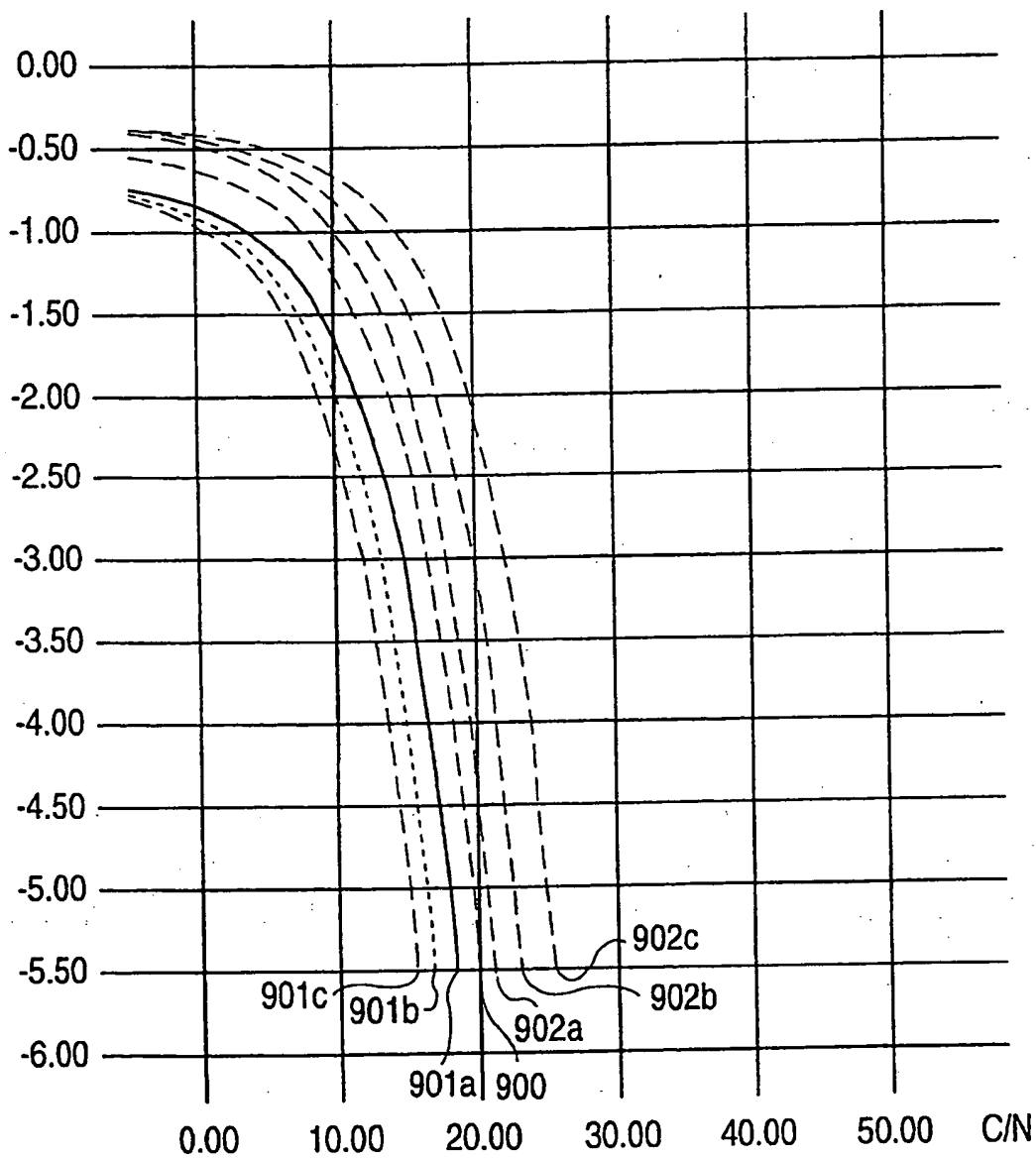


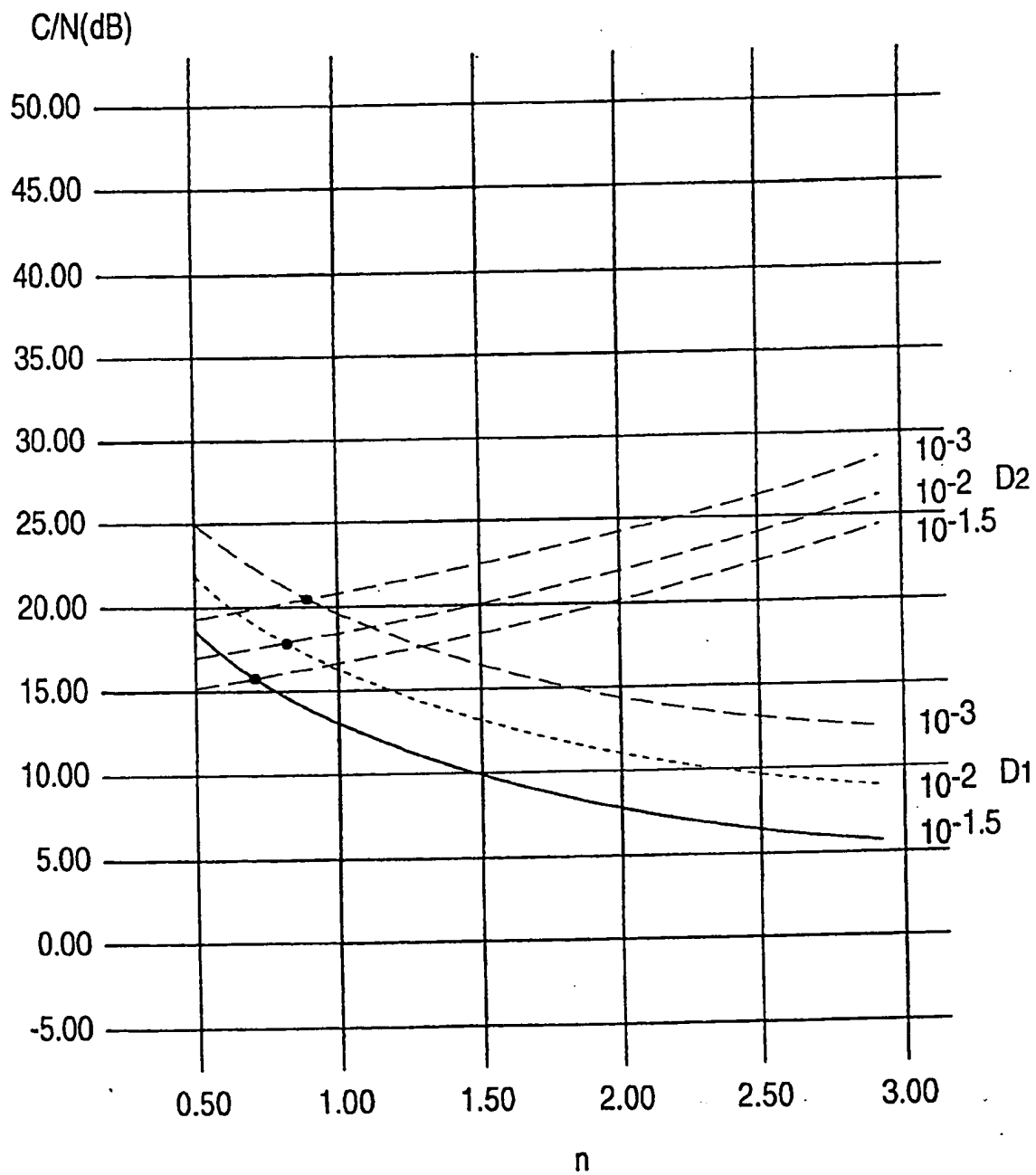
FIG. 103

FIG. 104

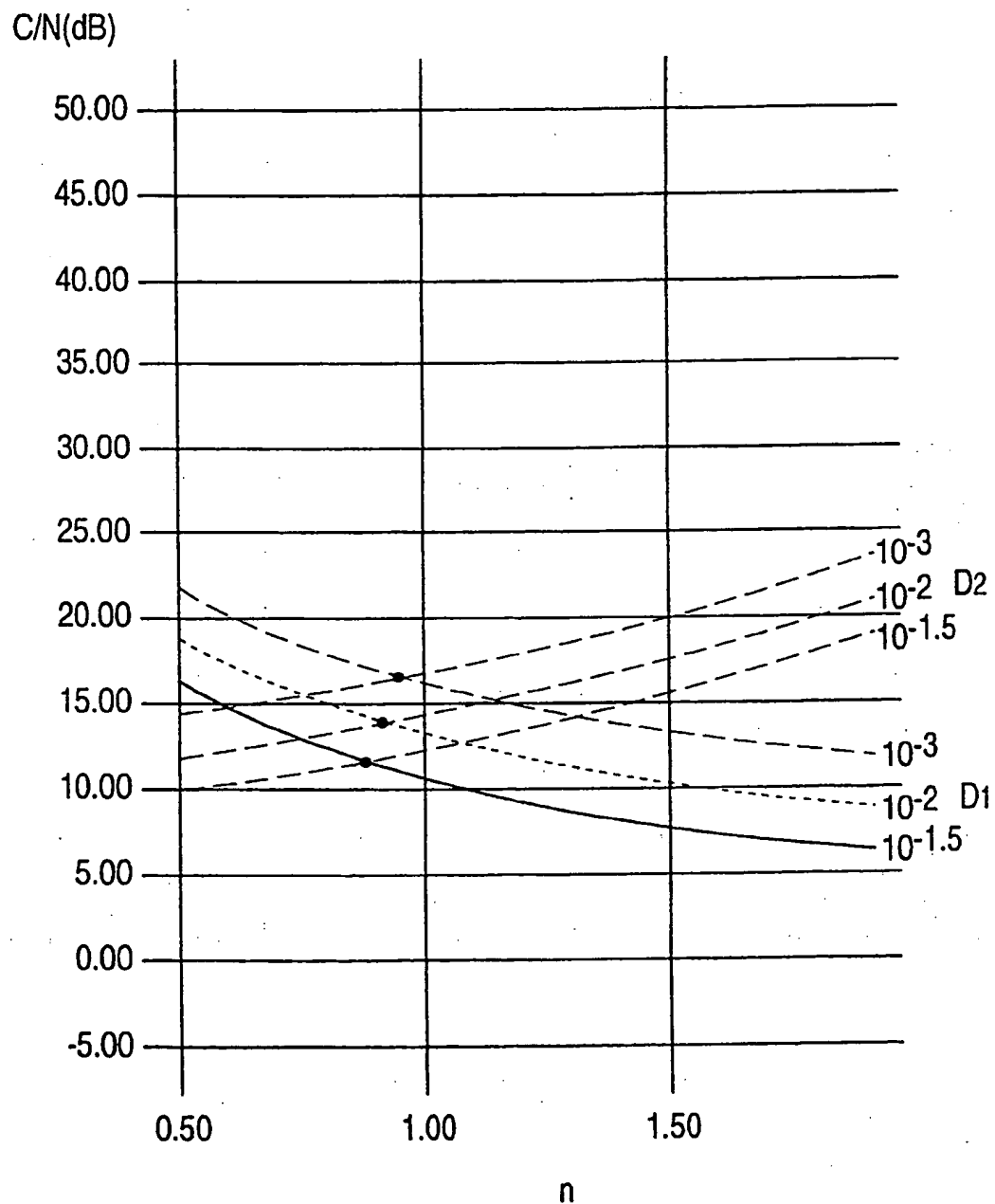


FIG. 105

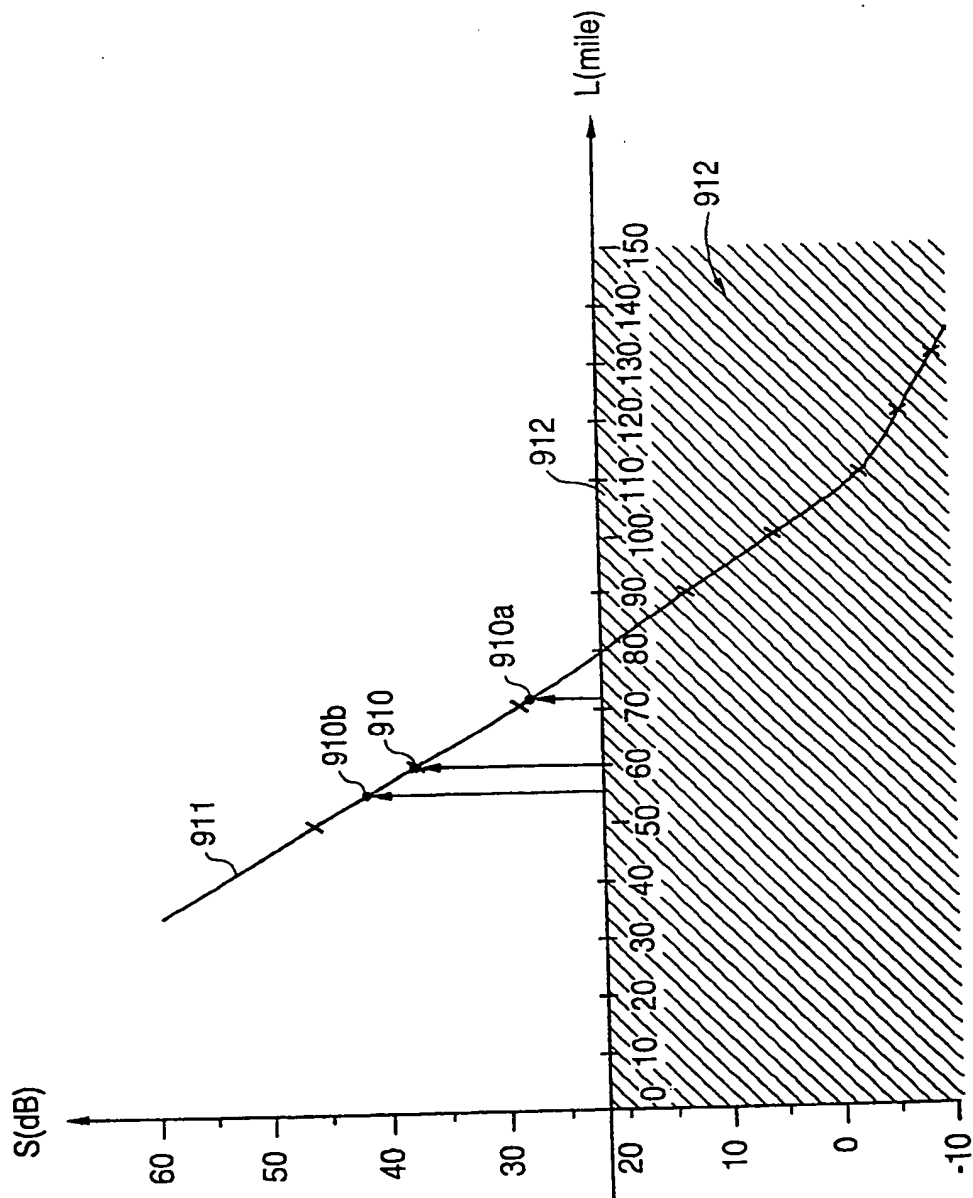


FIG. 106

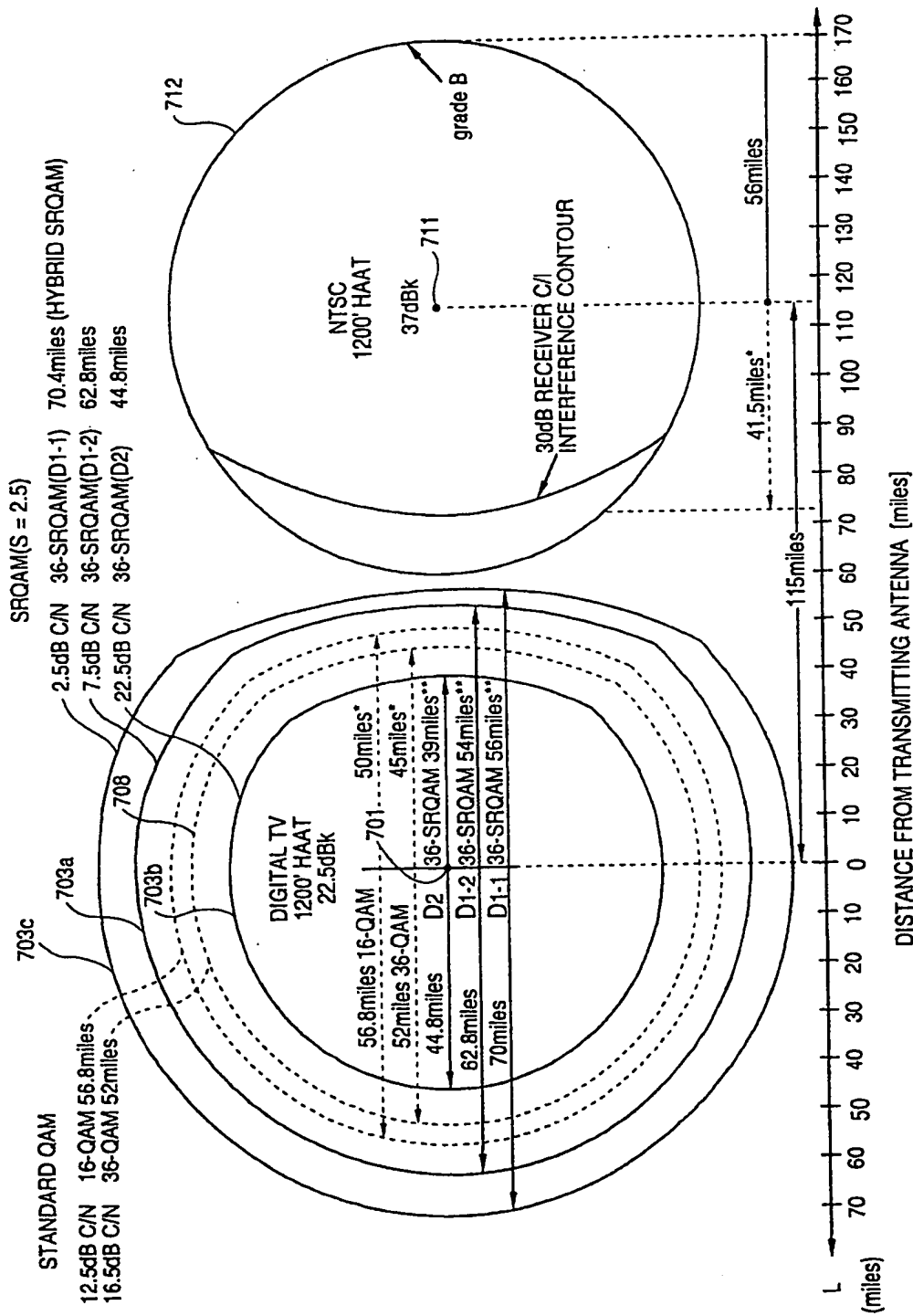


FIG. 107

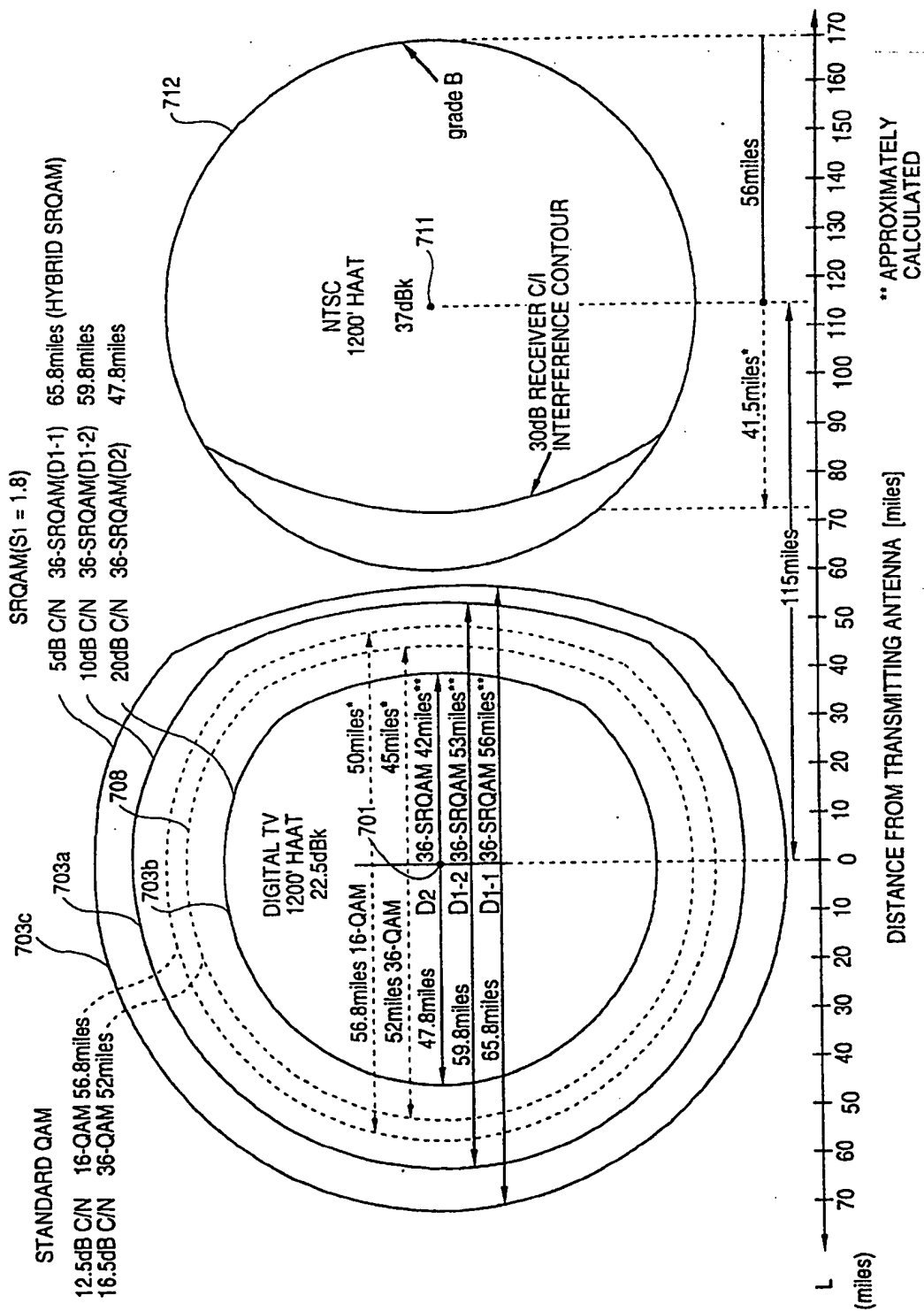


FIG. 108(a)

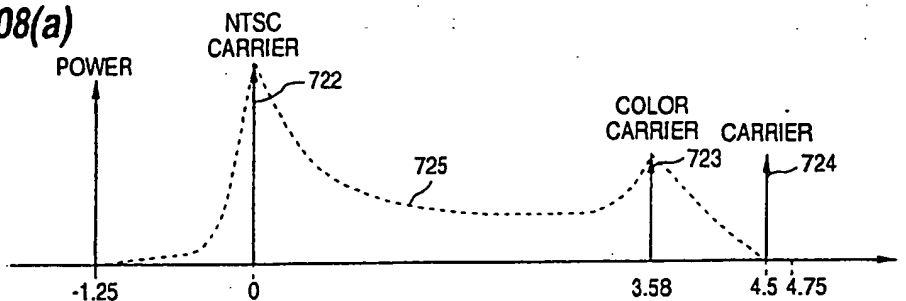


FIG. 108(b)

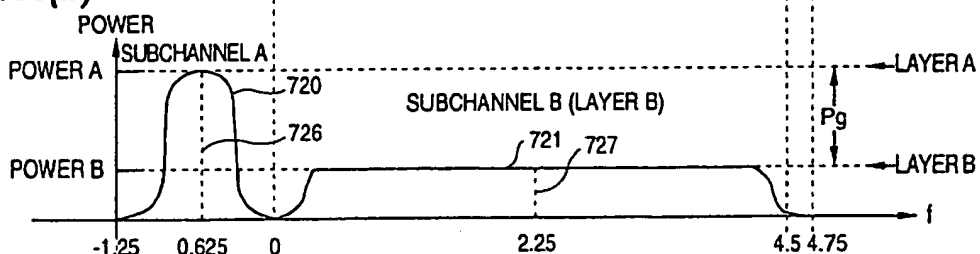


FIG. 108(c)

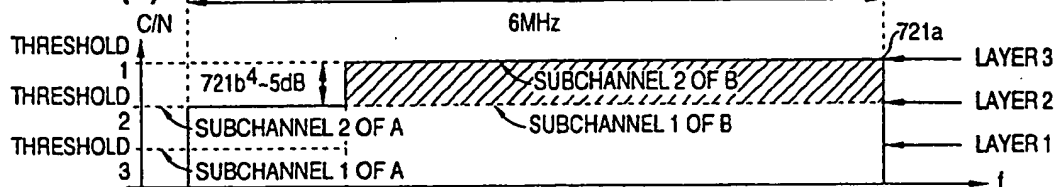


FIG. 108(d)

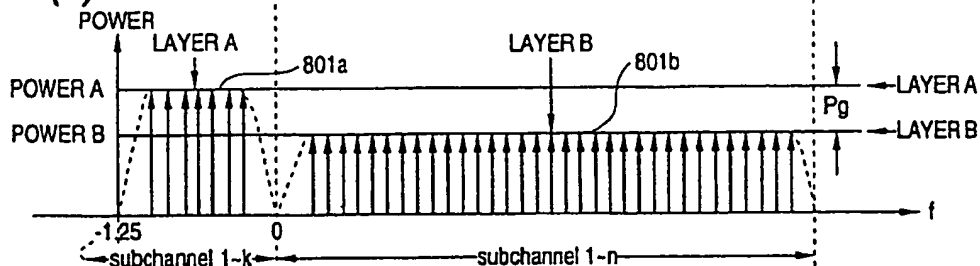


FIG. 108(e)

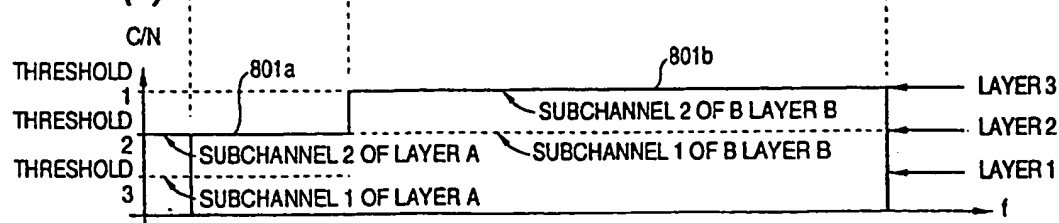


FIG. 109

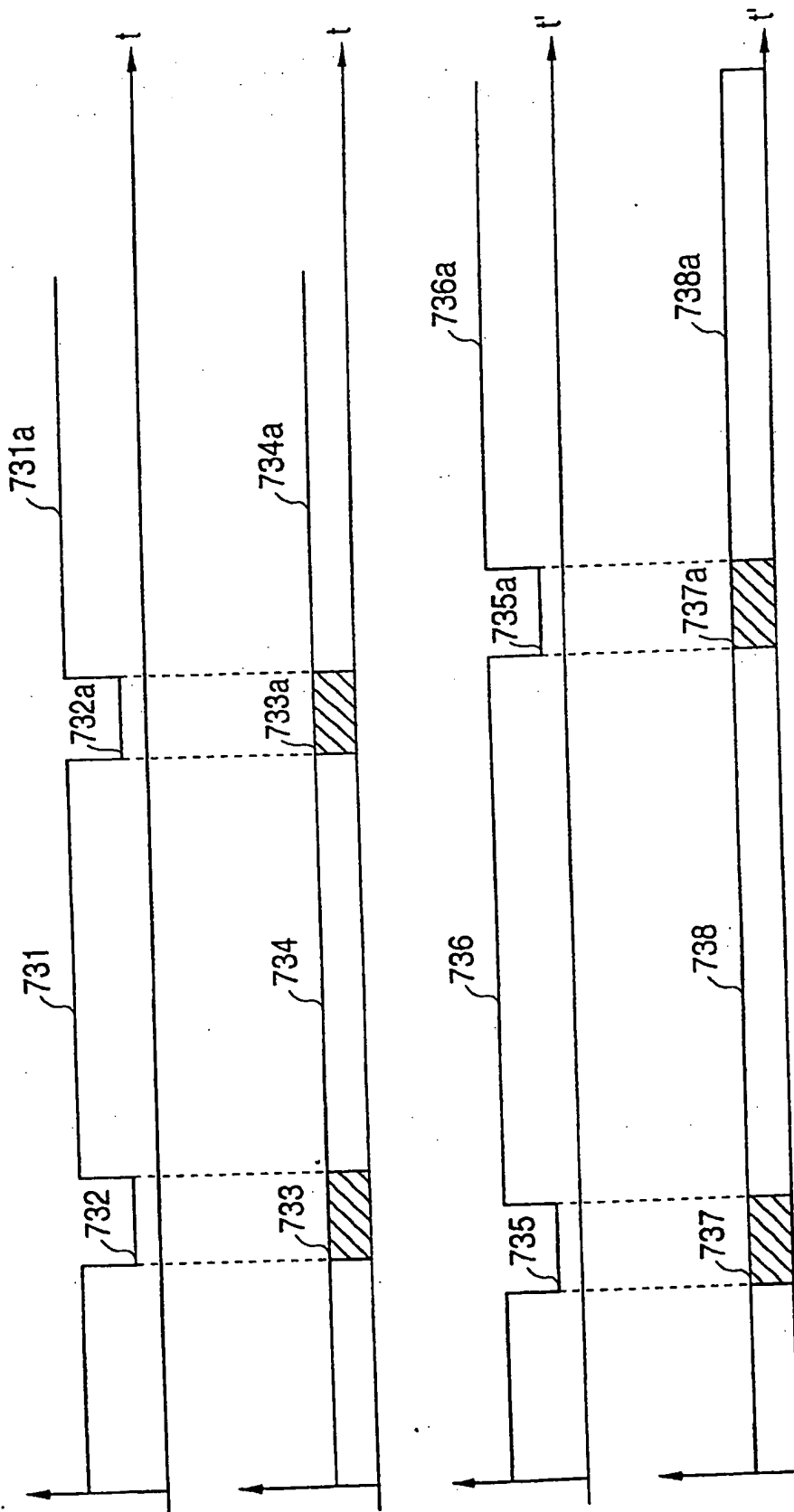
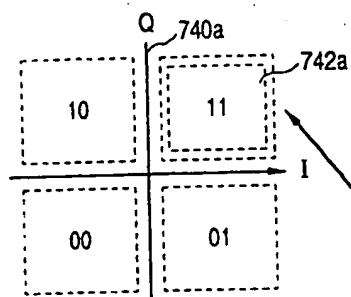
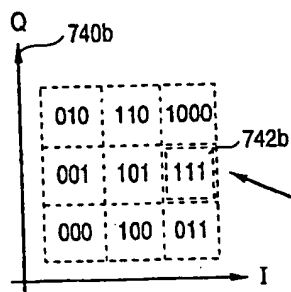


FIG. 111

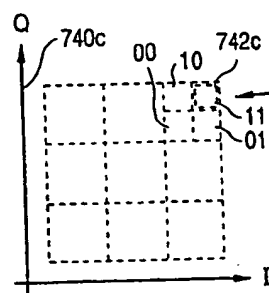
SUBCHANNEL-1 (SRQAM:D1 = 2bit)



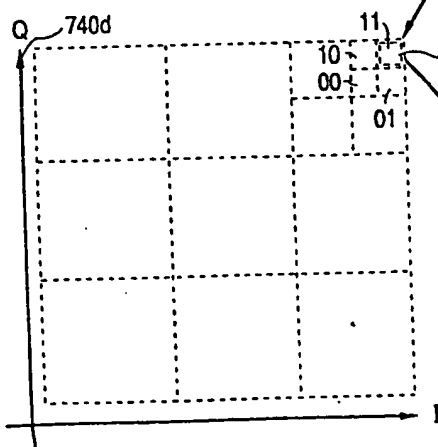
SUBCHANNEL-2 (36-SRQAM:D2 = 3bit + 1/8bit)



SUBCHANNEL-3 (144-SRQAM:D3 = 2bit)



SUBCHANNEL-4 (576-SRQAM:D4 = 2bit)



CODE WORD-1

CODE WORD-2

CODE WORD-3

CODE WORD-4

741a 11 2bit

741b 111 3+1/8bit 9+1/8bit

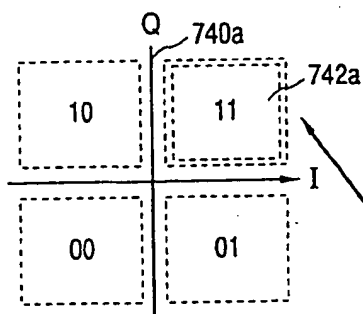
741c 11 2bit

741d 11 2bit

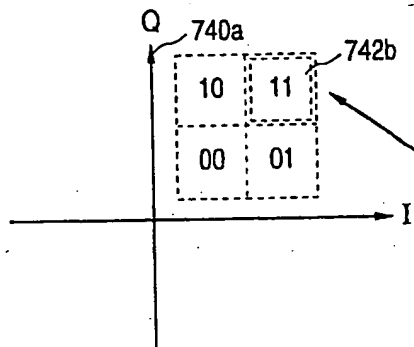
SIGNAL POINT
CODE WORD
11 11 11 11

FIG. 112

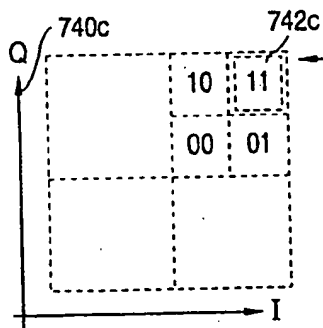
SUBCHANNEL-1 (SRQAM:D1 = 2bit)



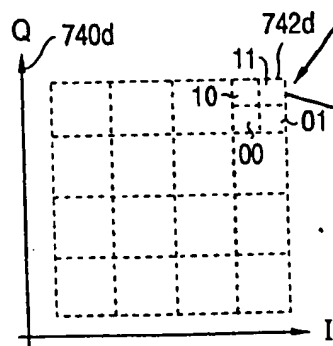
SUBCHANNEL-2 (16-SRQAM:D2 = 2bit)



SUBCHANNEL-3 (64-SRQAM:D3 = 2bit)



SUBCHANNEL-4 (256-SRQAM:D4 = 2bit)

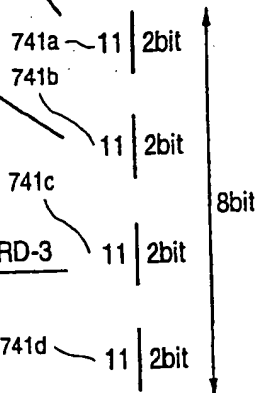


CODE WORD-1

CODE WORD-2

CODE WORD-3

CODE WORD-4



SIGNAL POINT
CODE WORD
11 11 11 11

FIG. 113

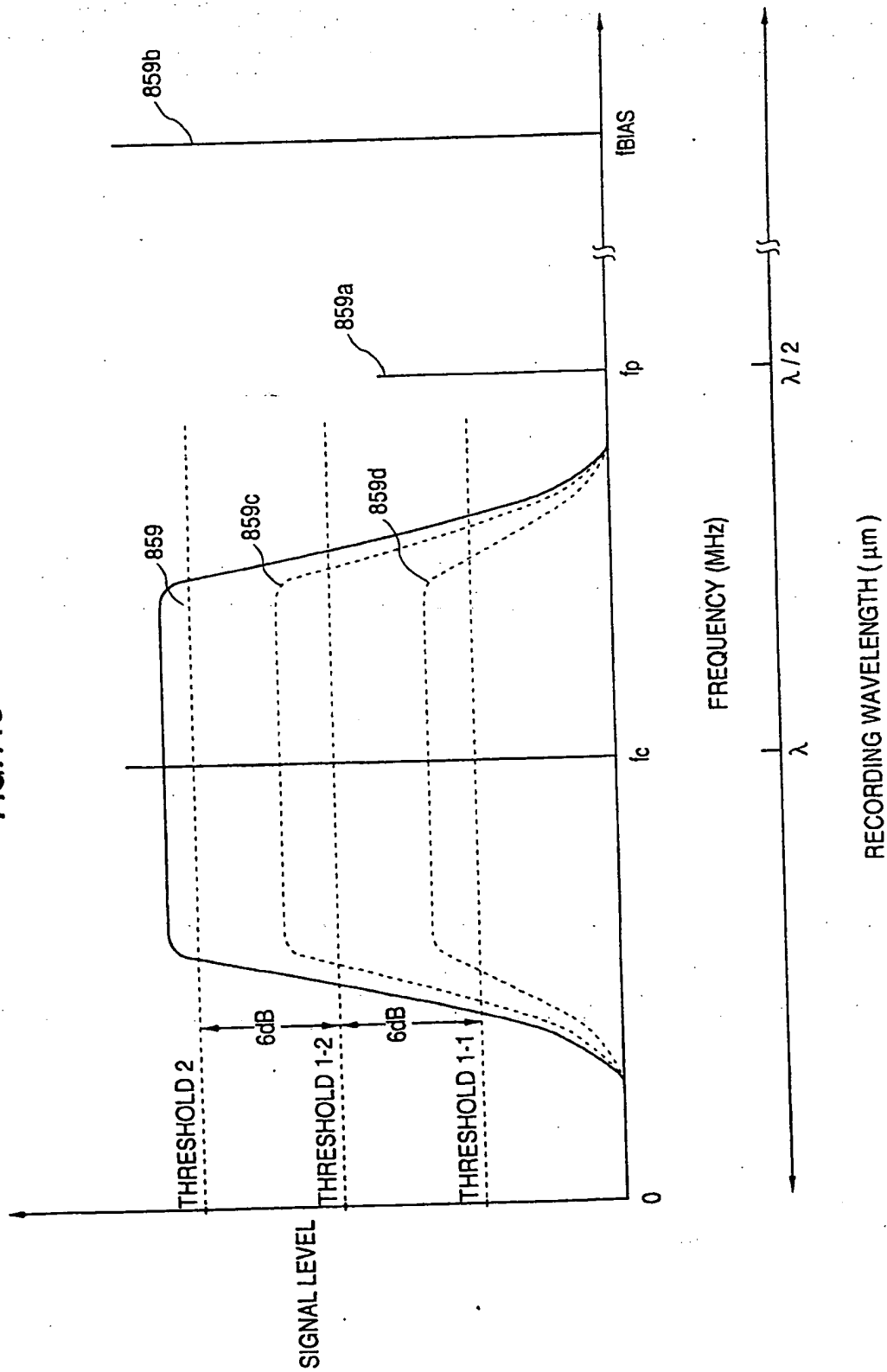


FIG. 114

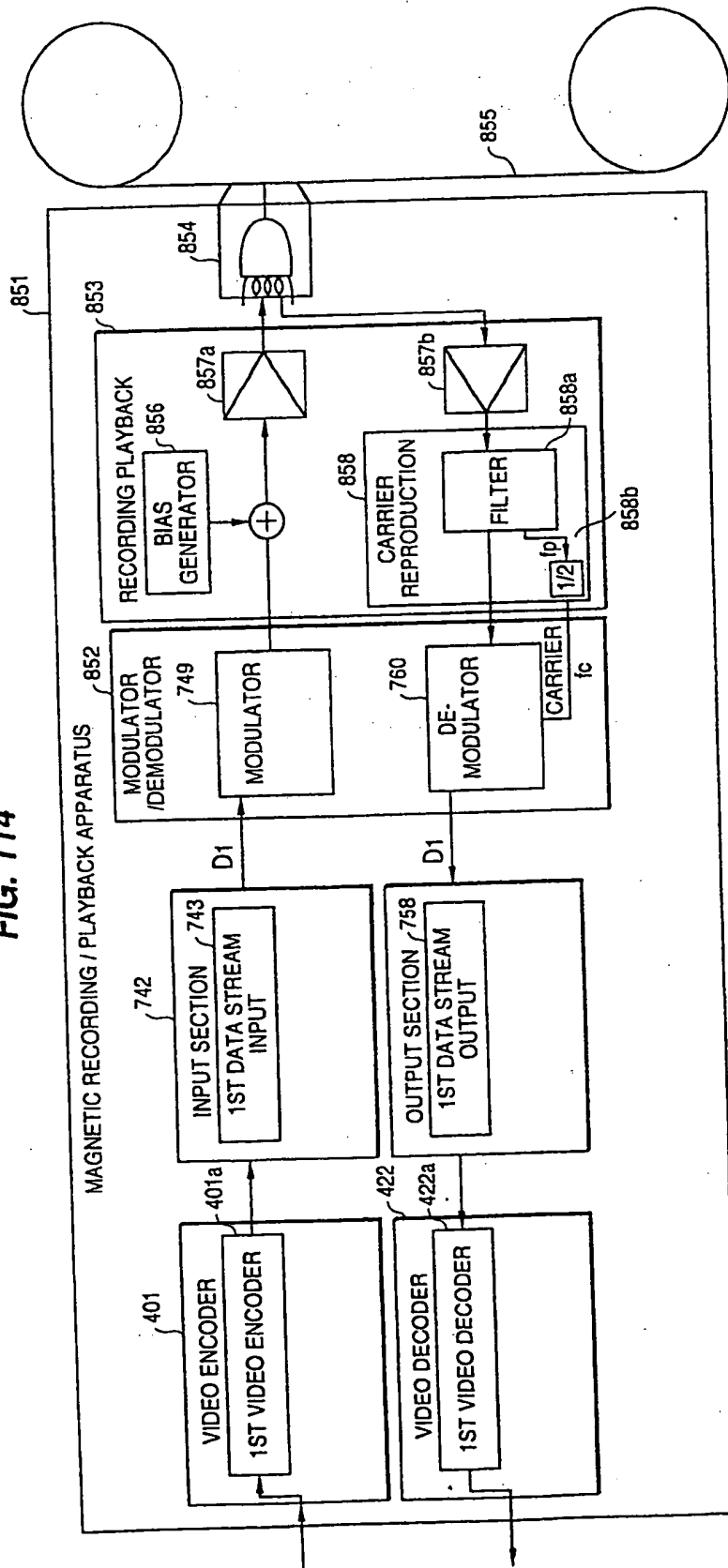


FIG. 115

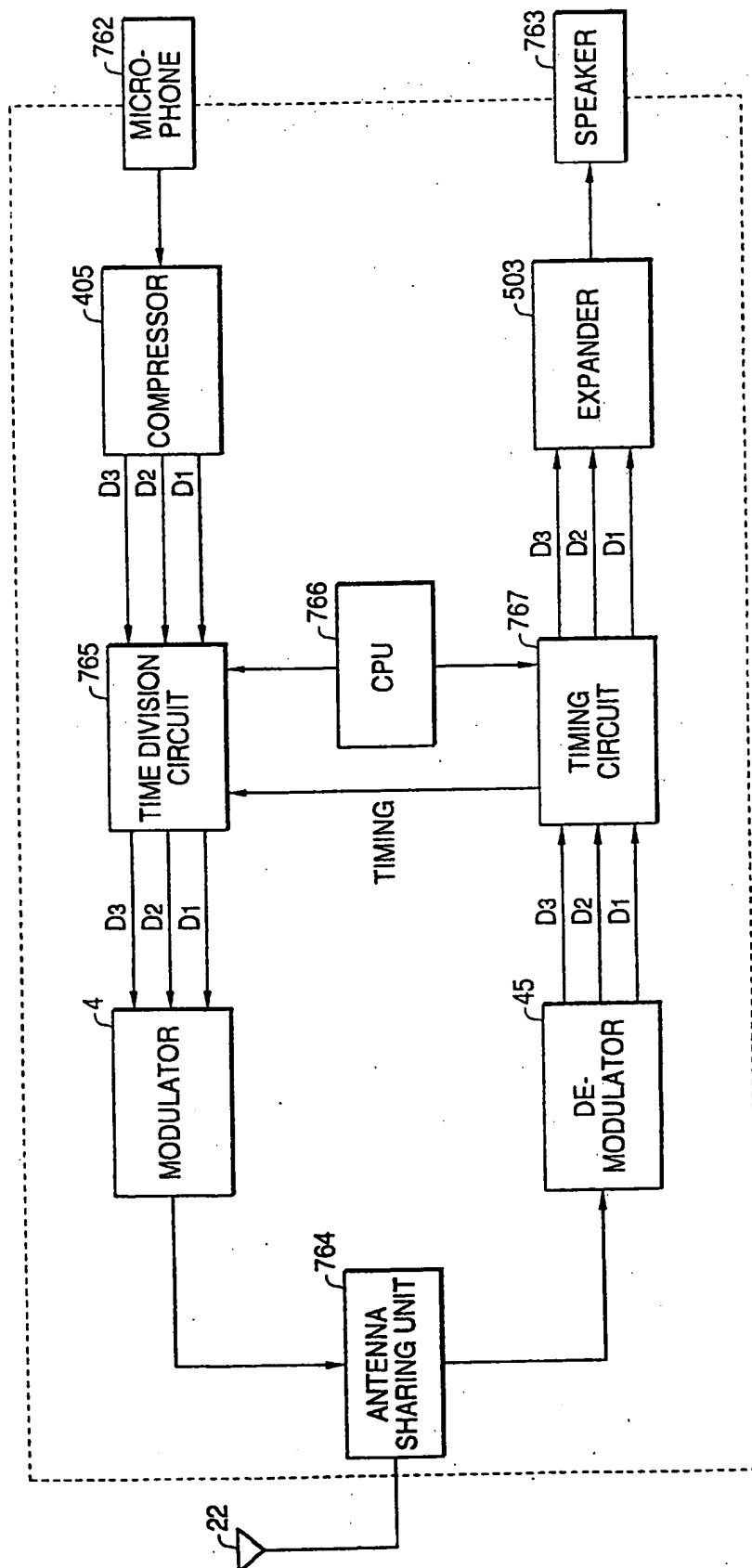


FIG. 116

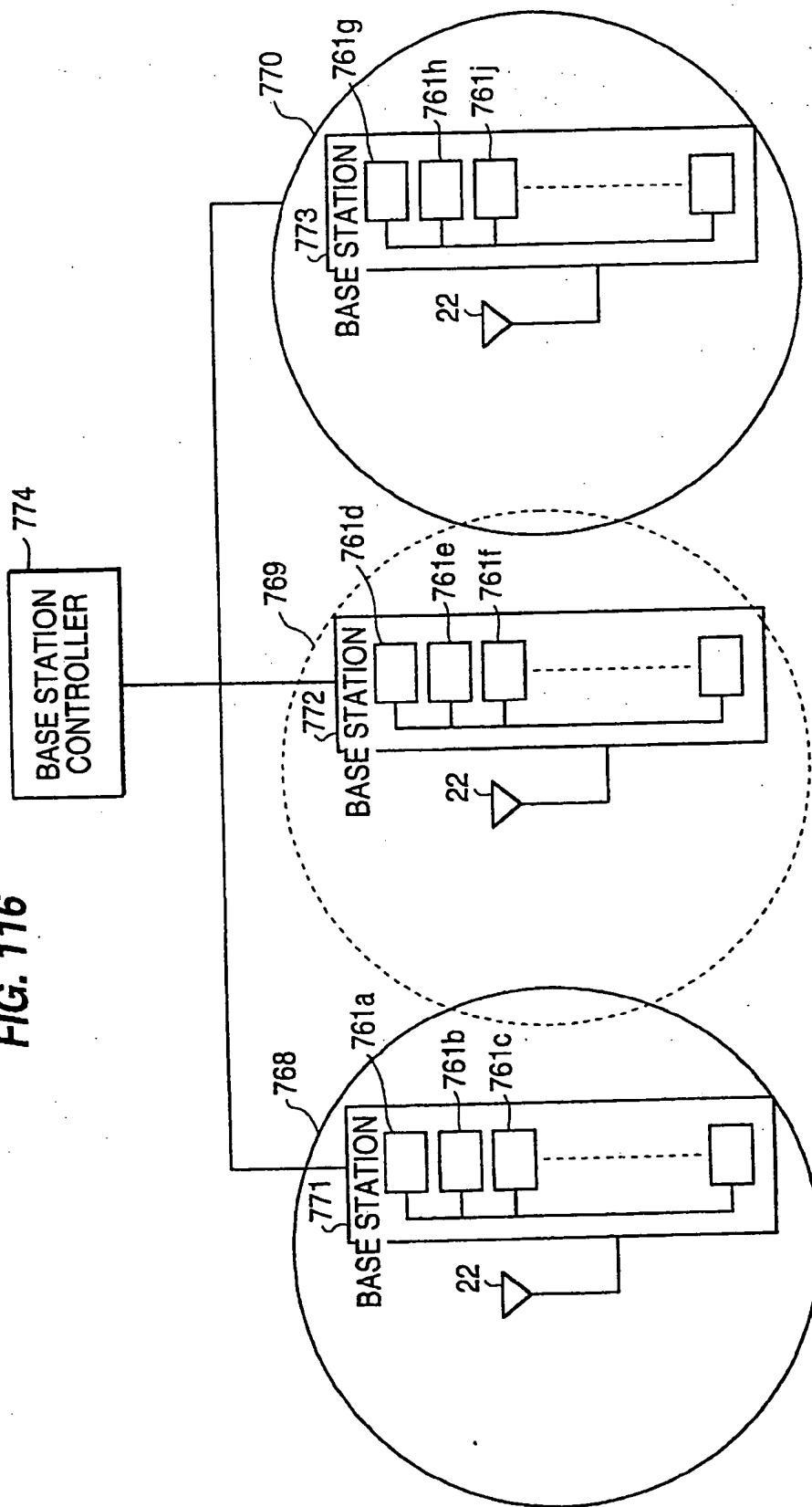


FIG. 117

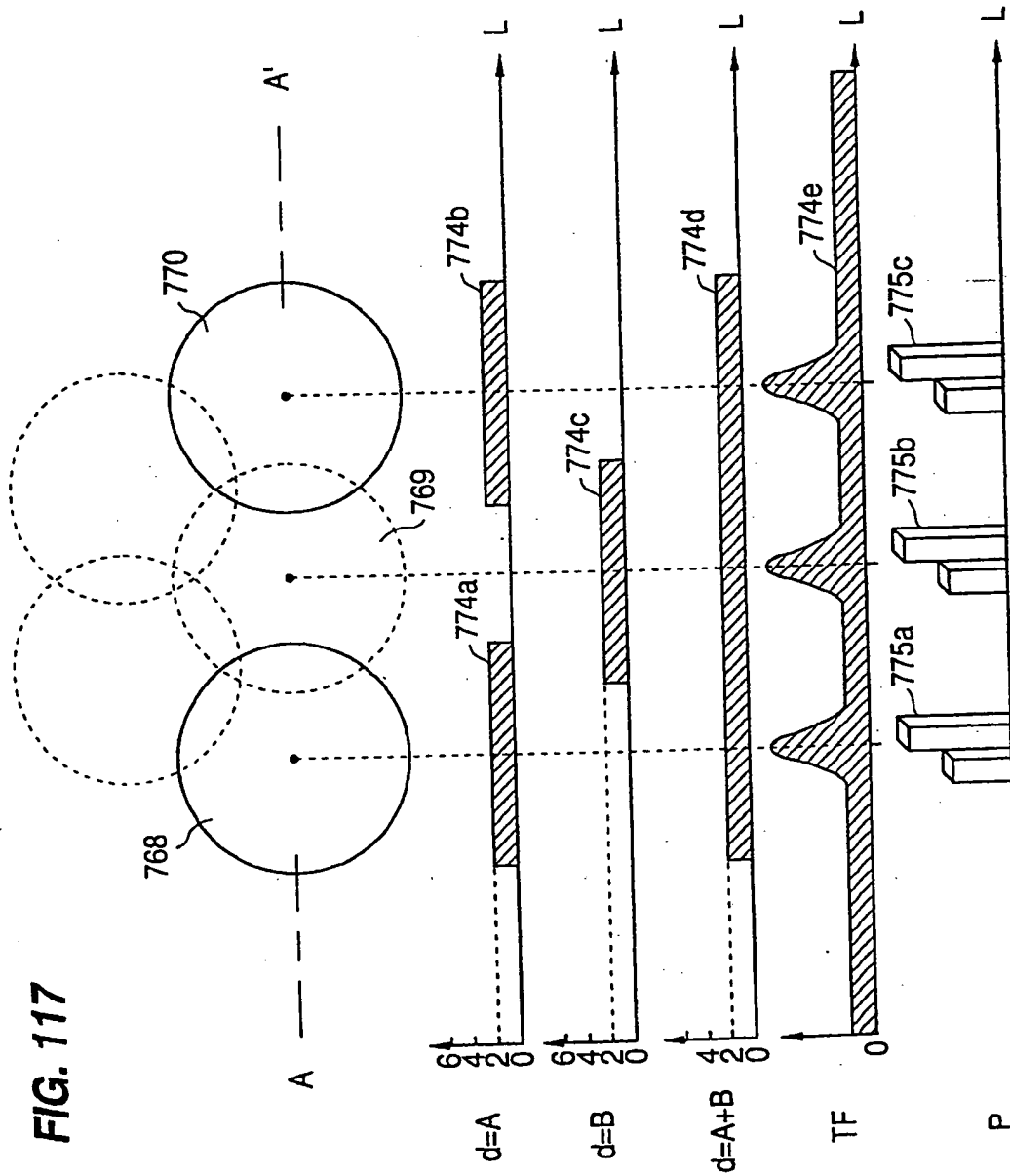


FIG. 118

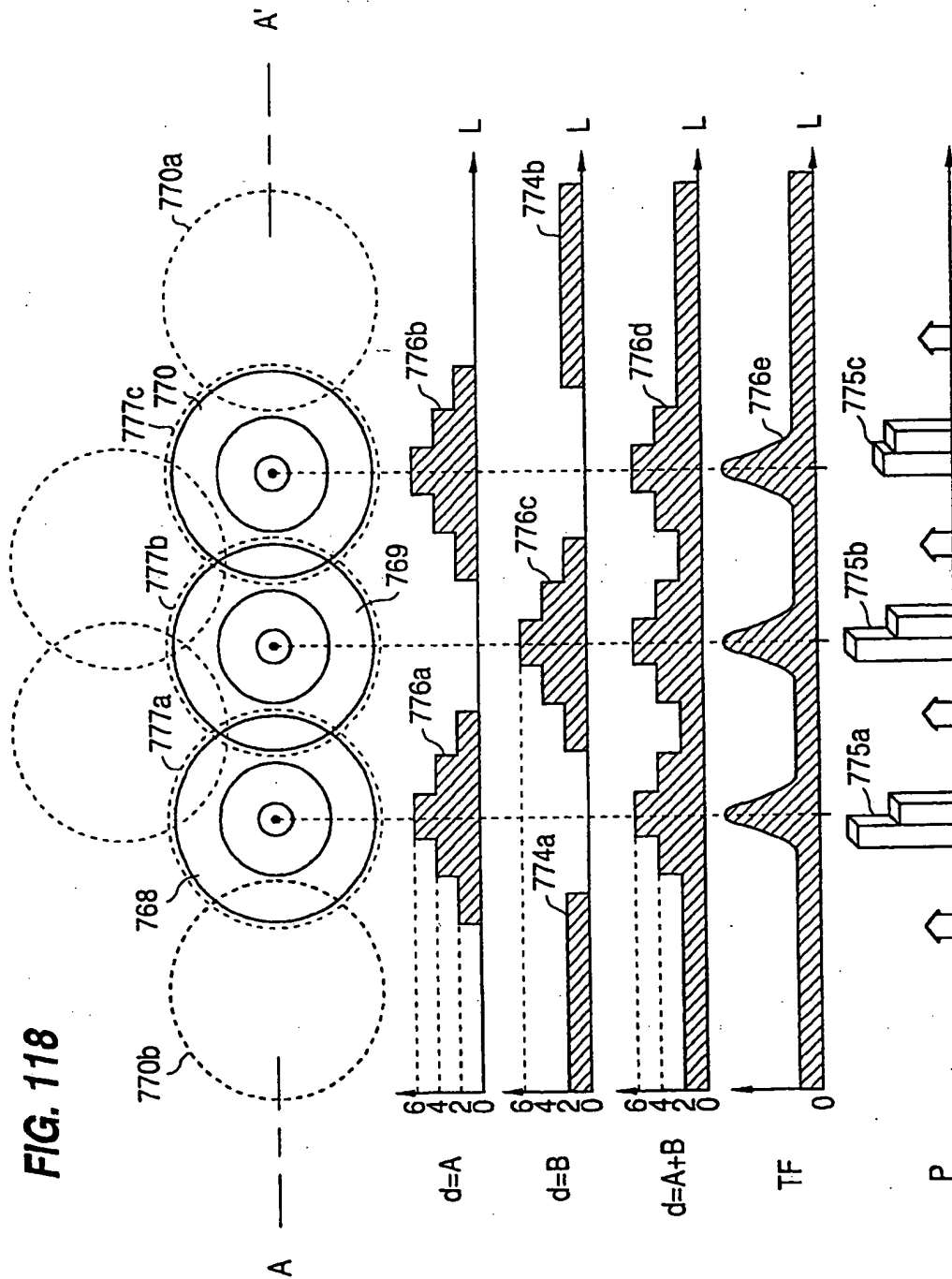


FIG. 119(a)

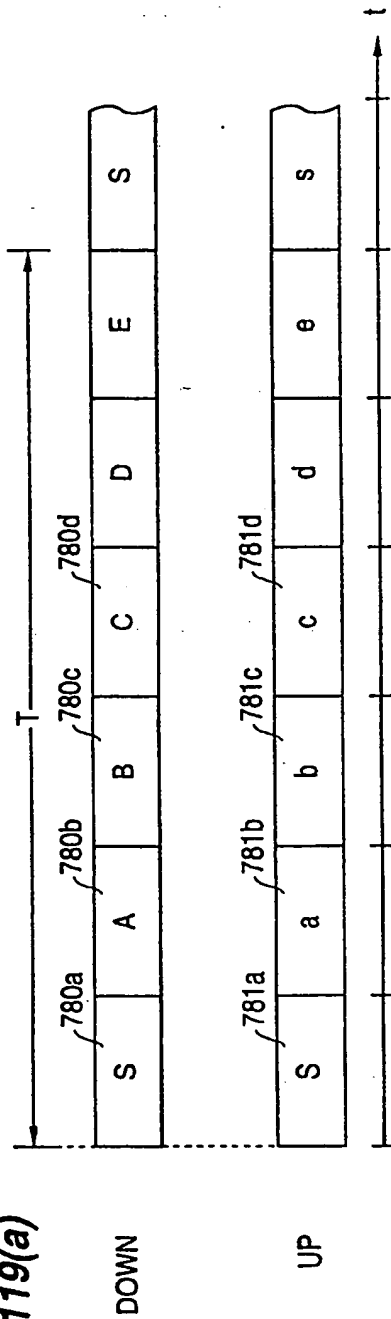


FIG. 119(b)

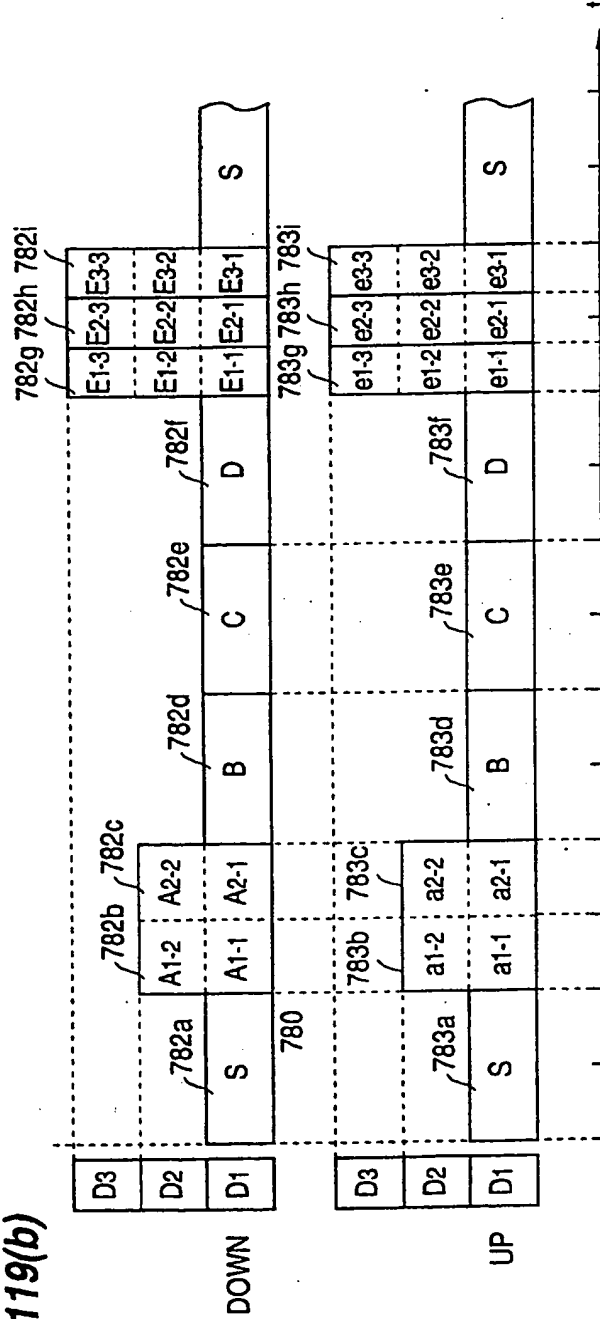


FIG. 120(a)

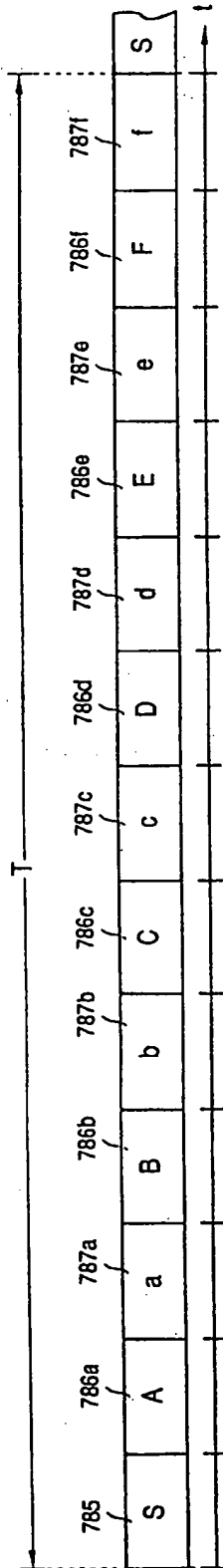


FIG. 120(b)

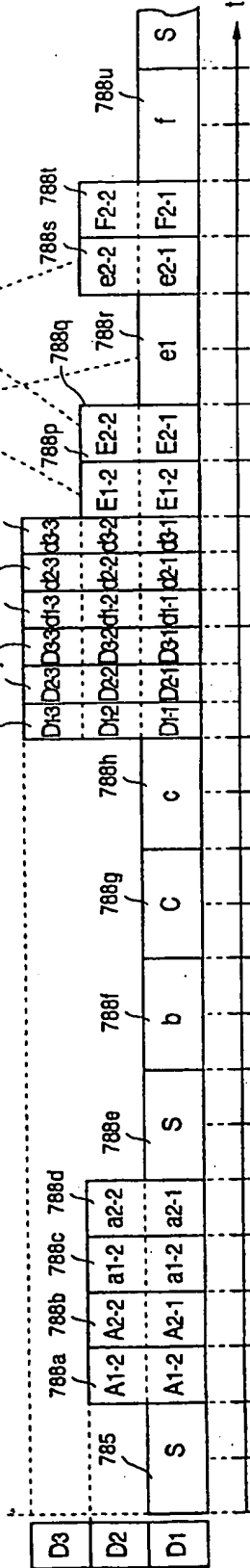


FIG. 121

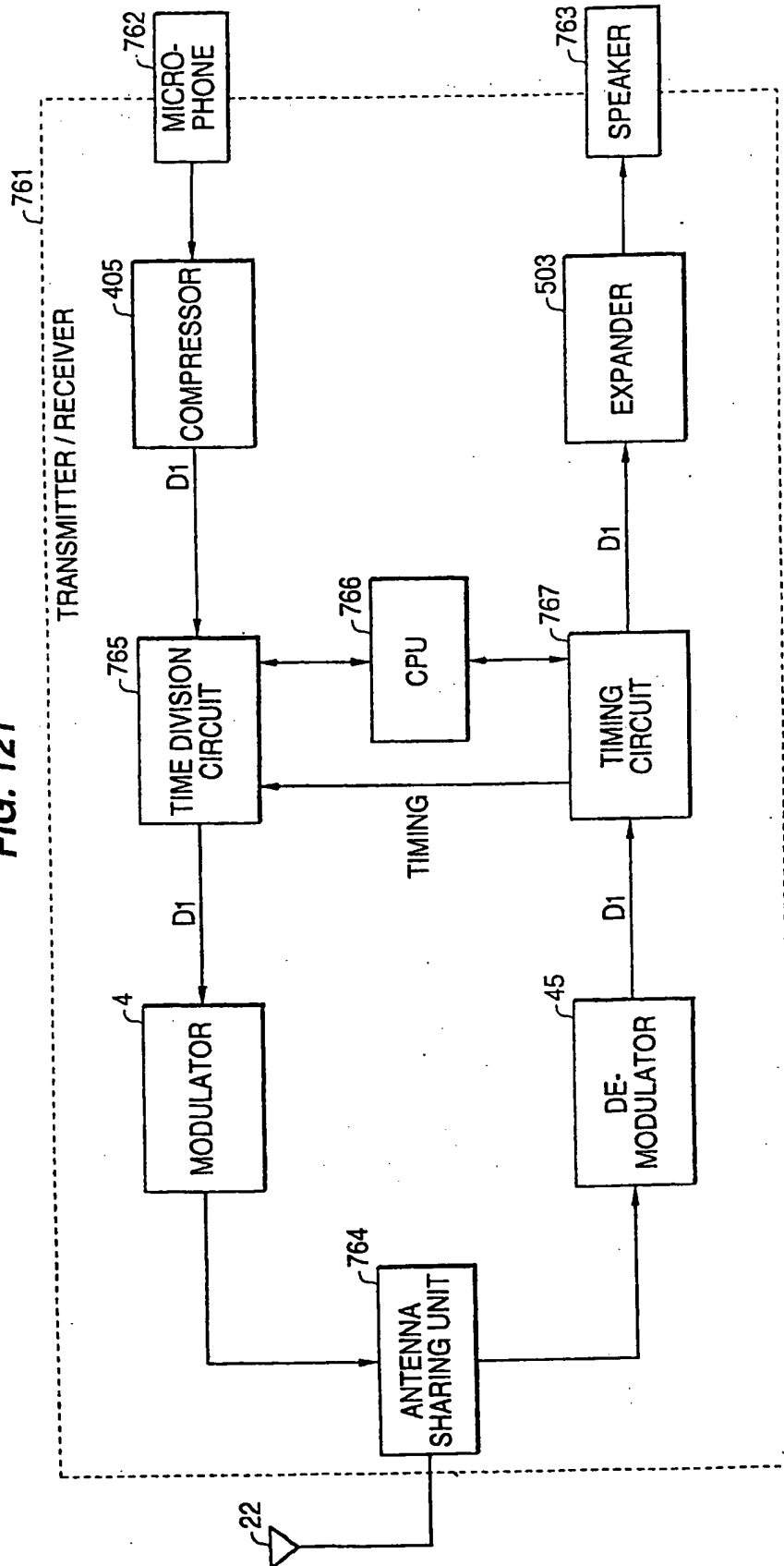


FIG. 122

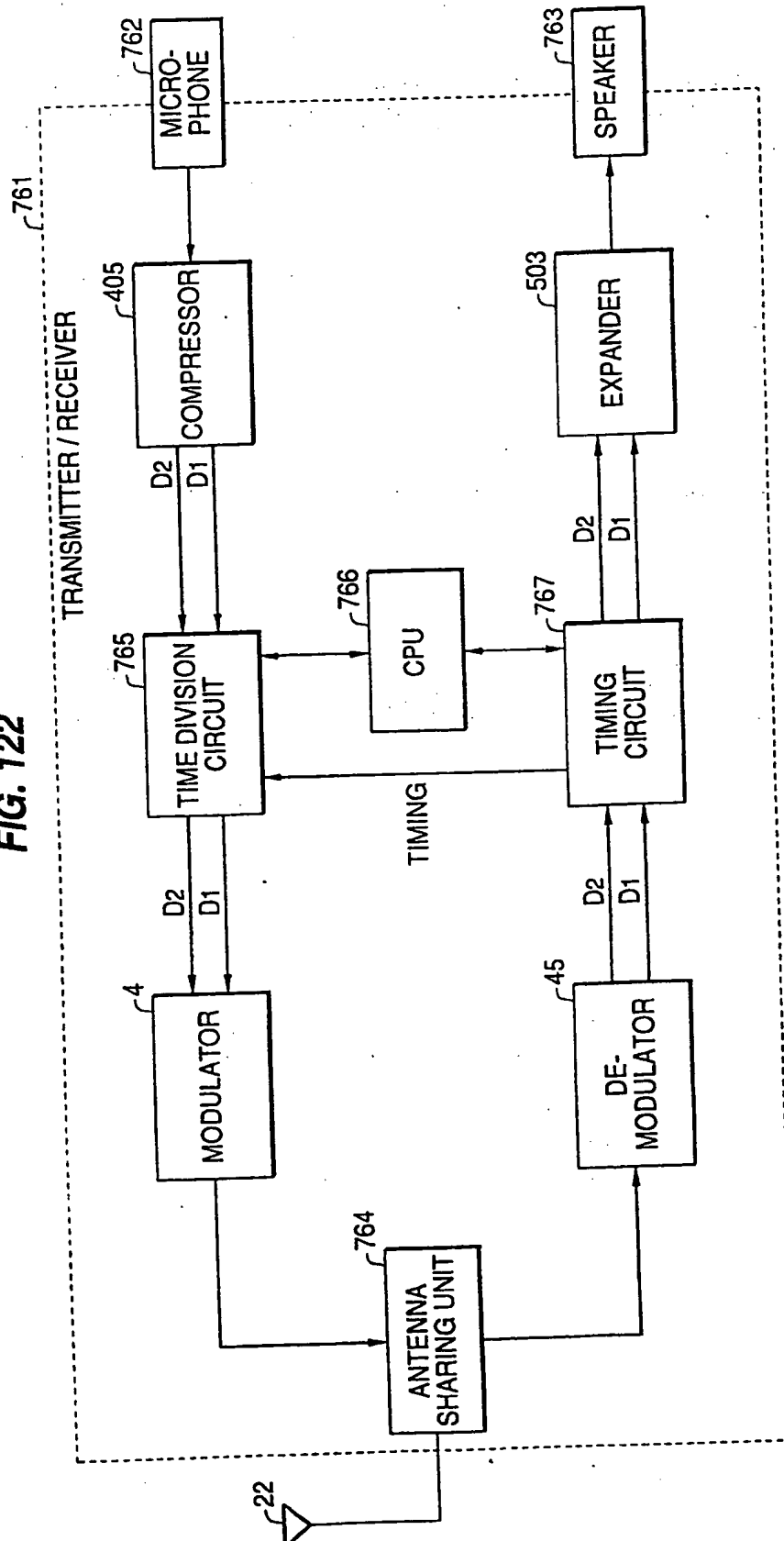
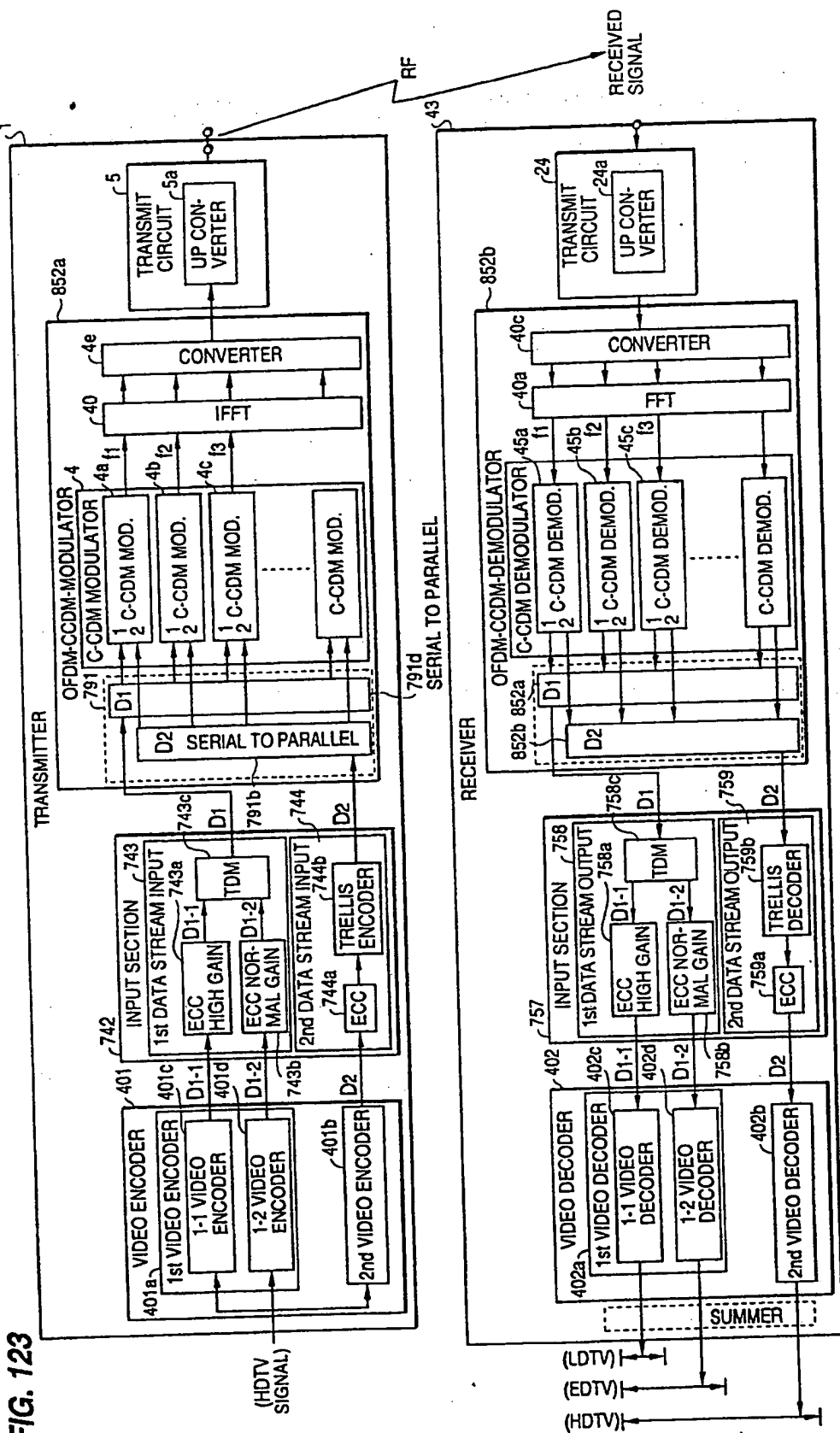


FIG. 123



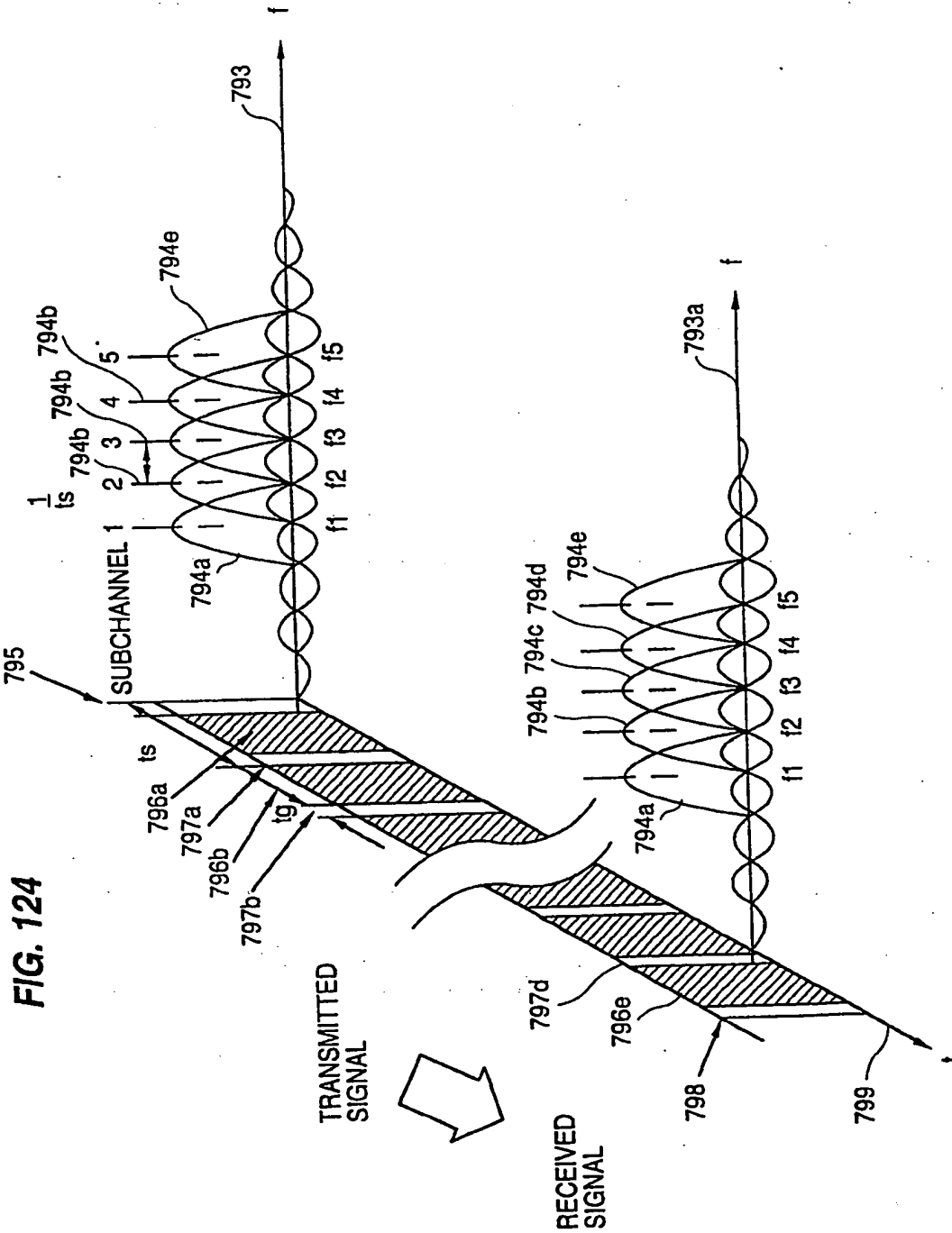


FIG. 125(a)

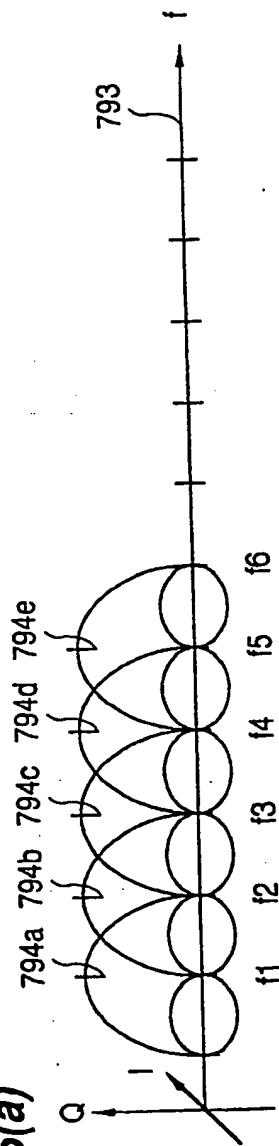
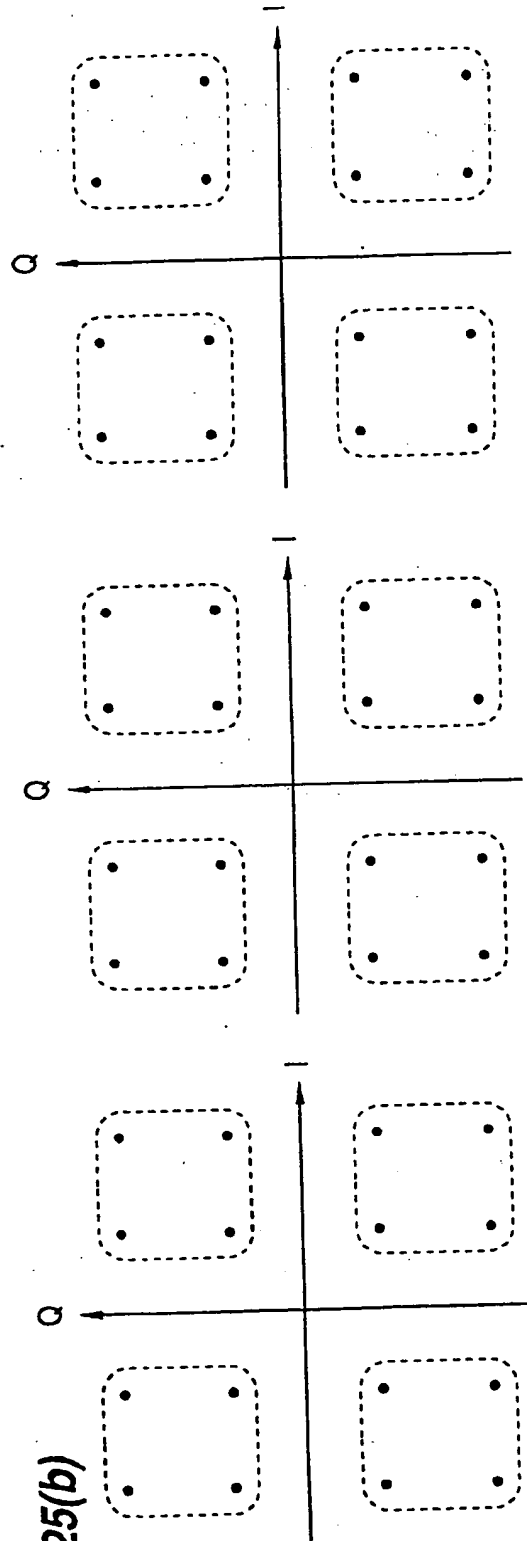


FIG. 125(b)



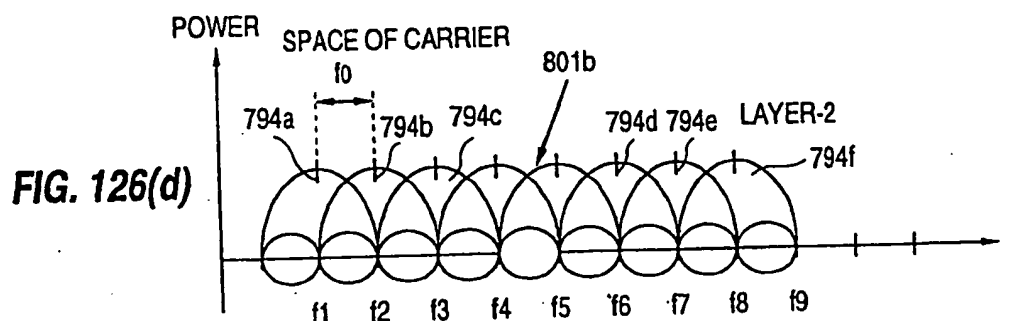
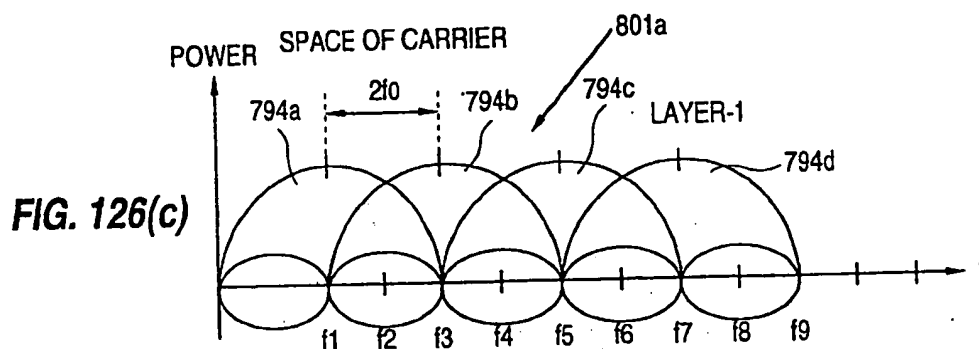
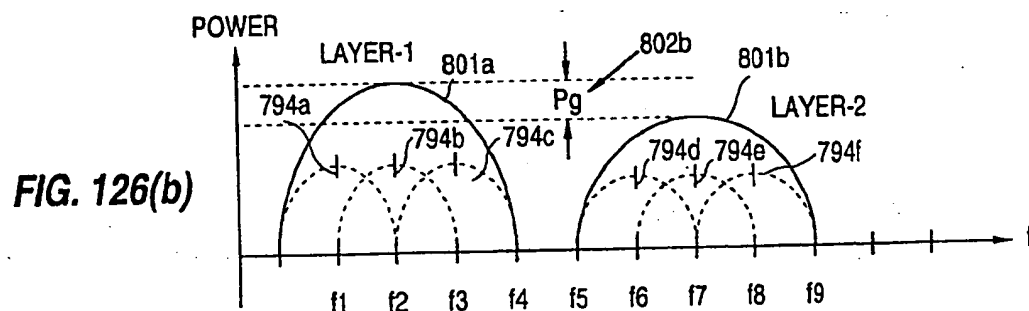
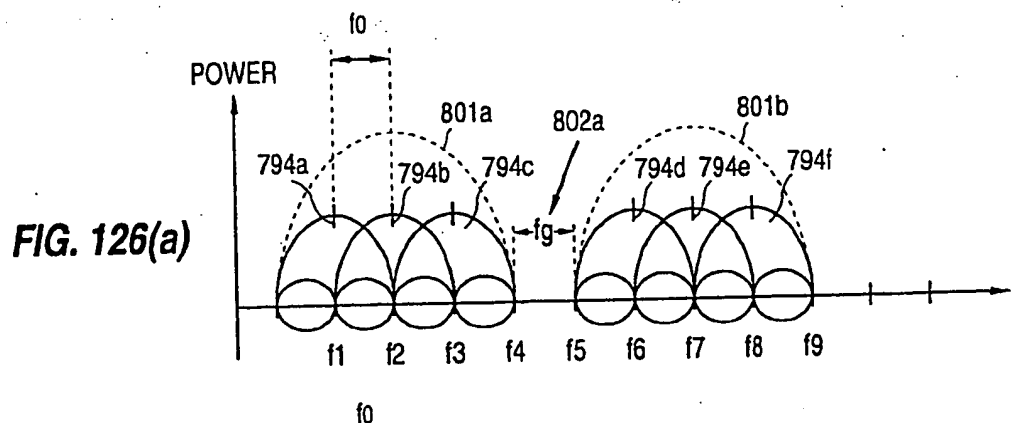


FIG. 127

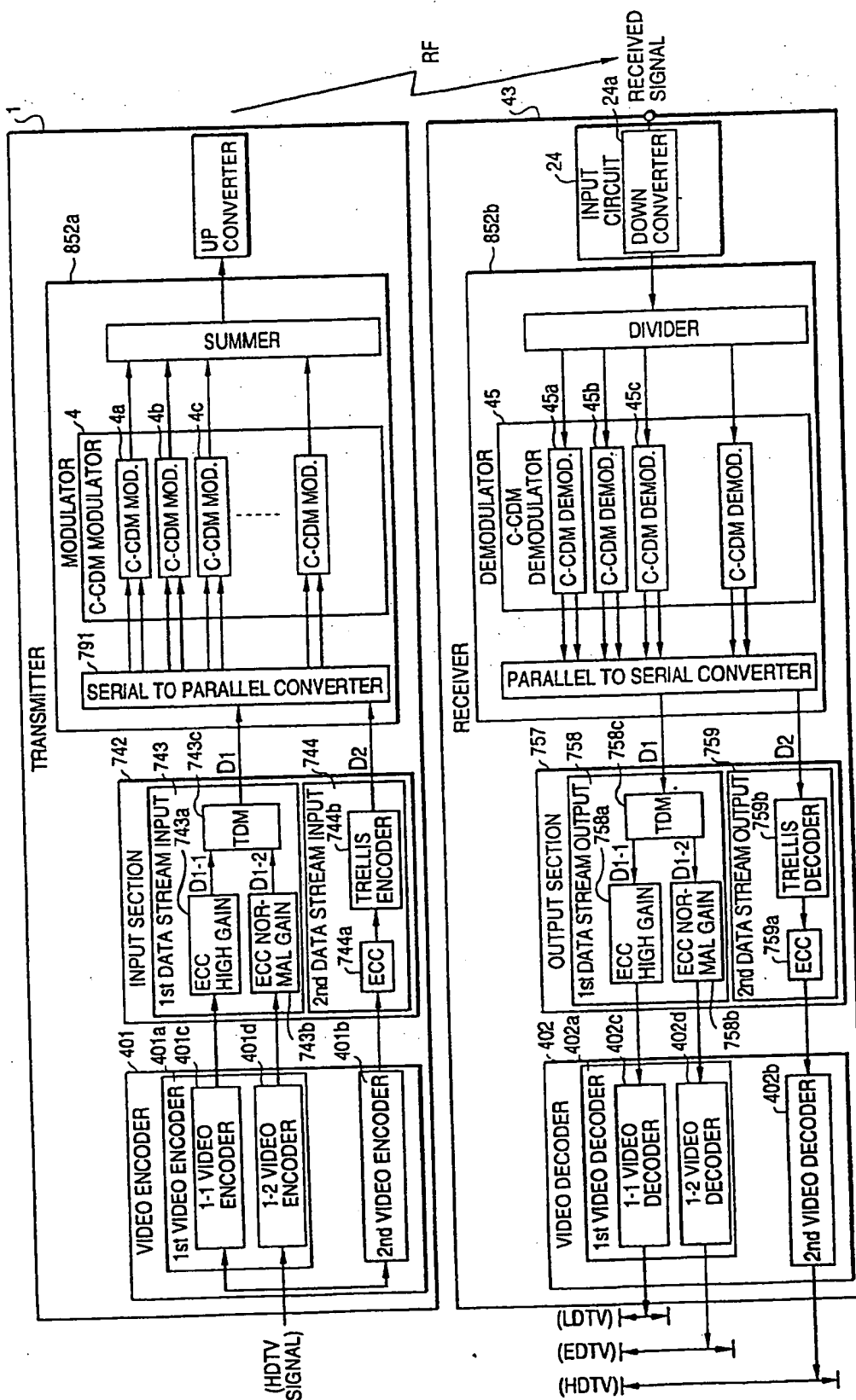


FIG. 128(a)

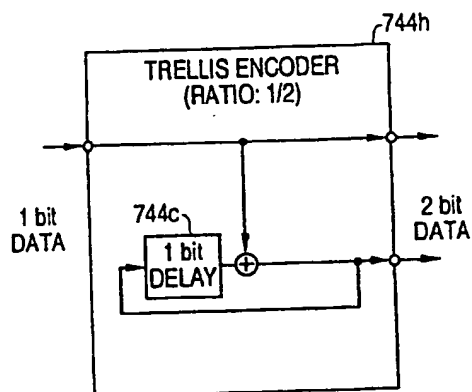


FIG. 128(d)

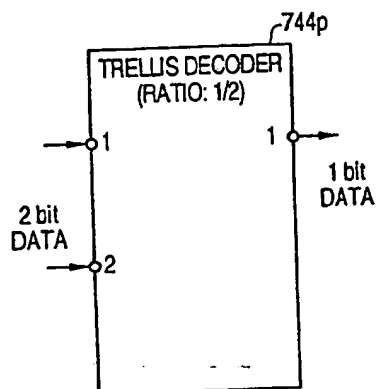


FIG. 128(b)

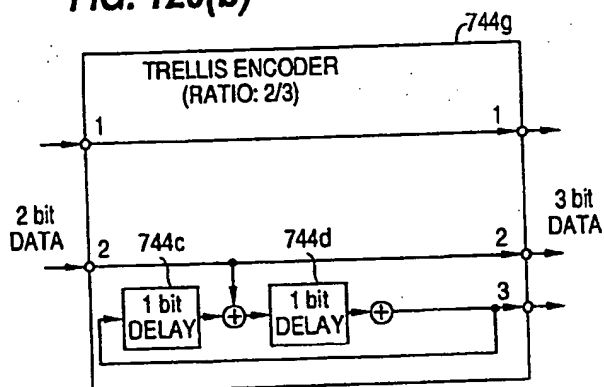


FIG. 128(e)

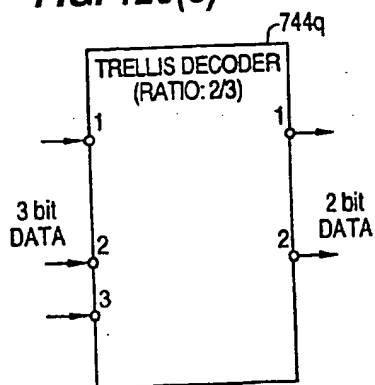


FIG. 128(c)

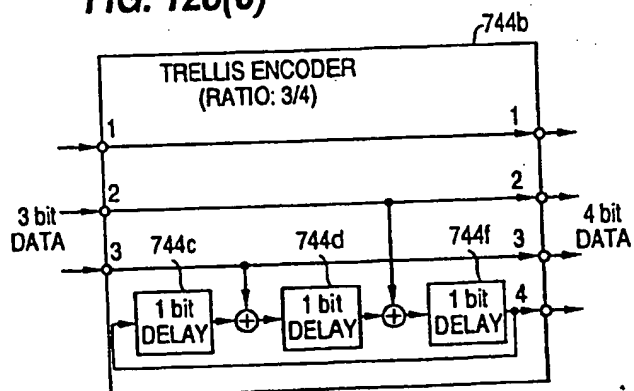


FIG. 128(f)

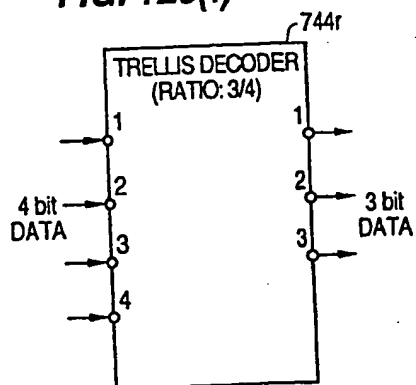


FIG. 129

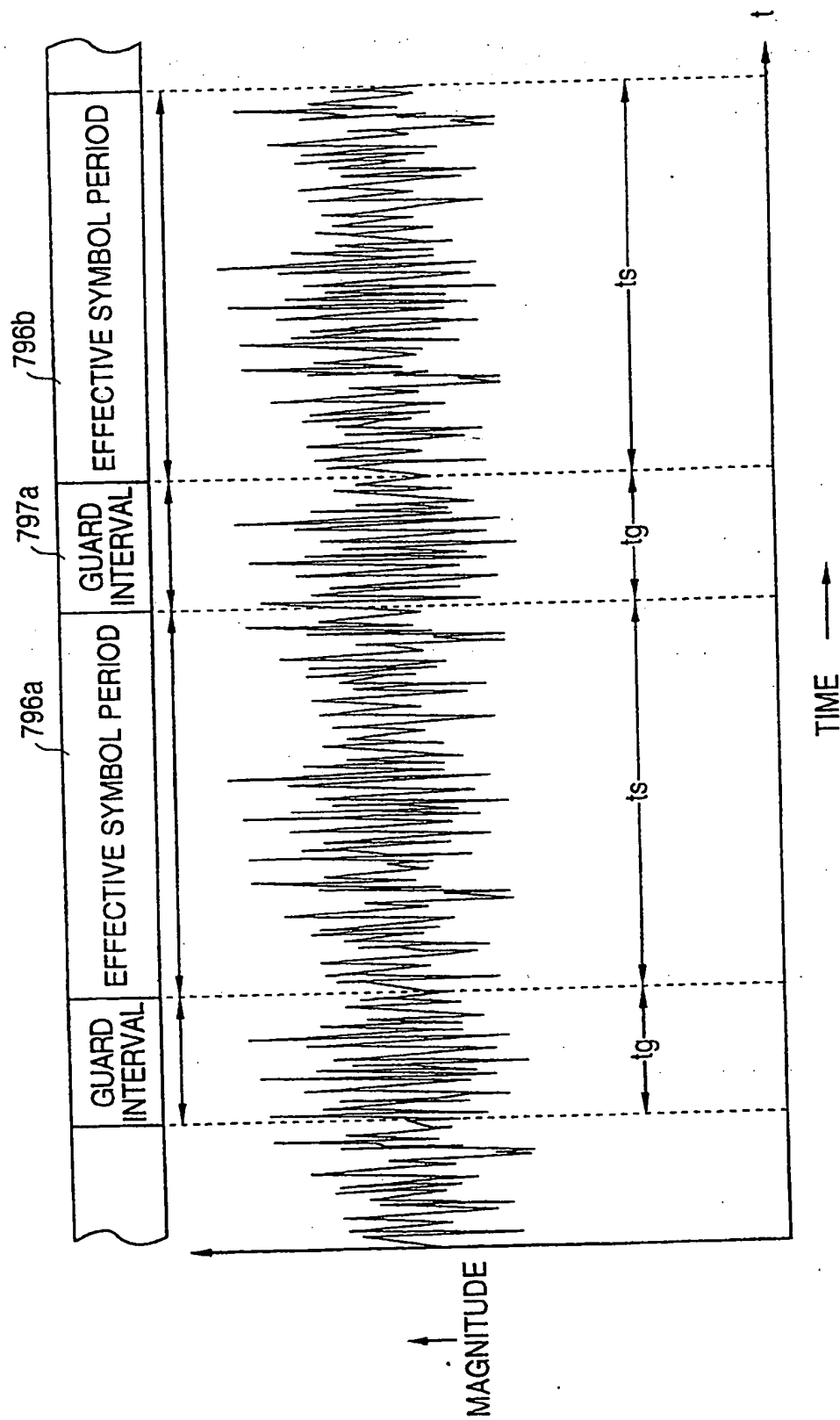


FIG. 130

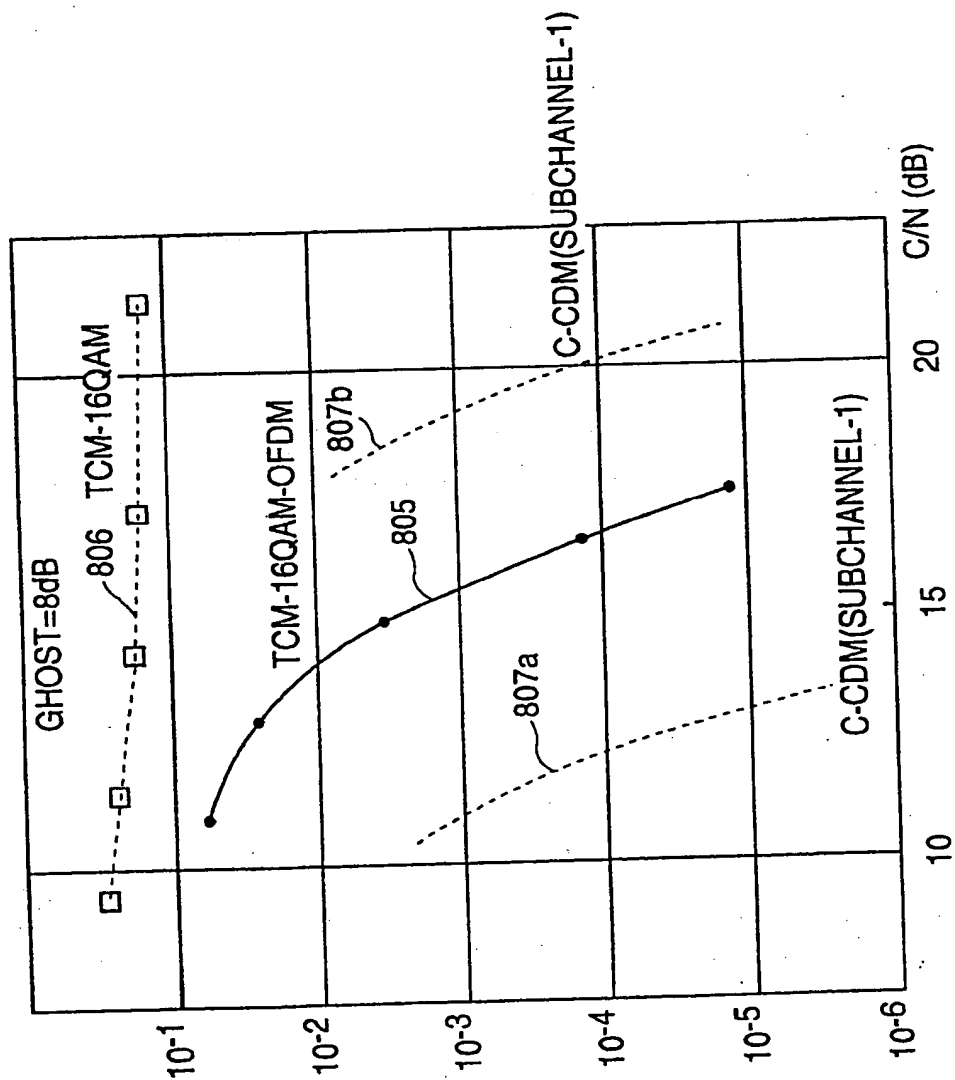


FIG. 131

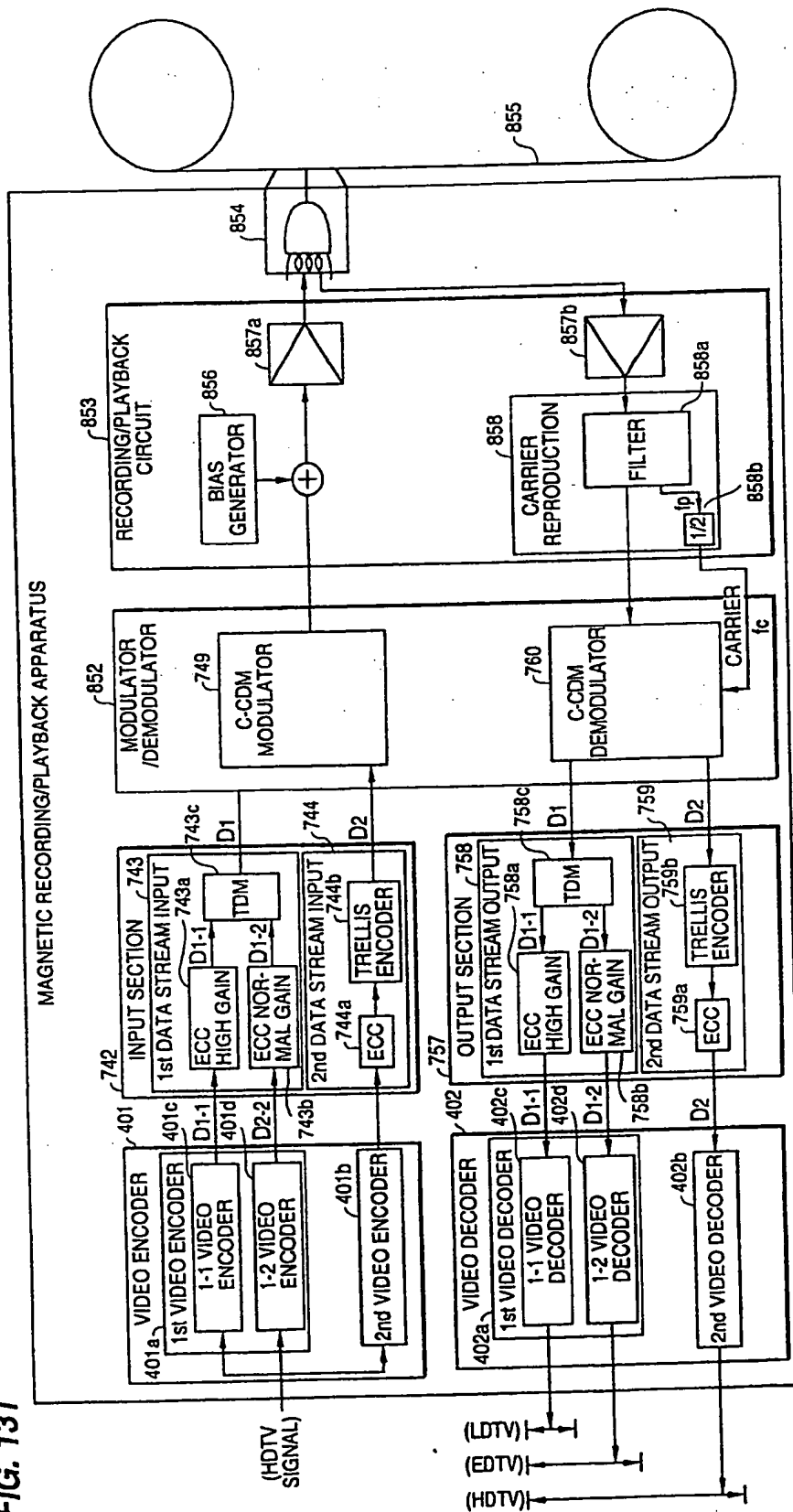


FIG. 133

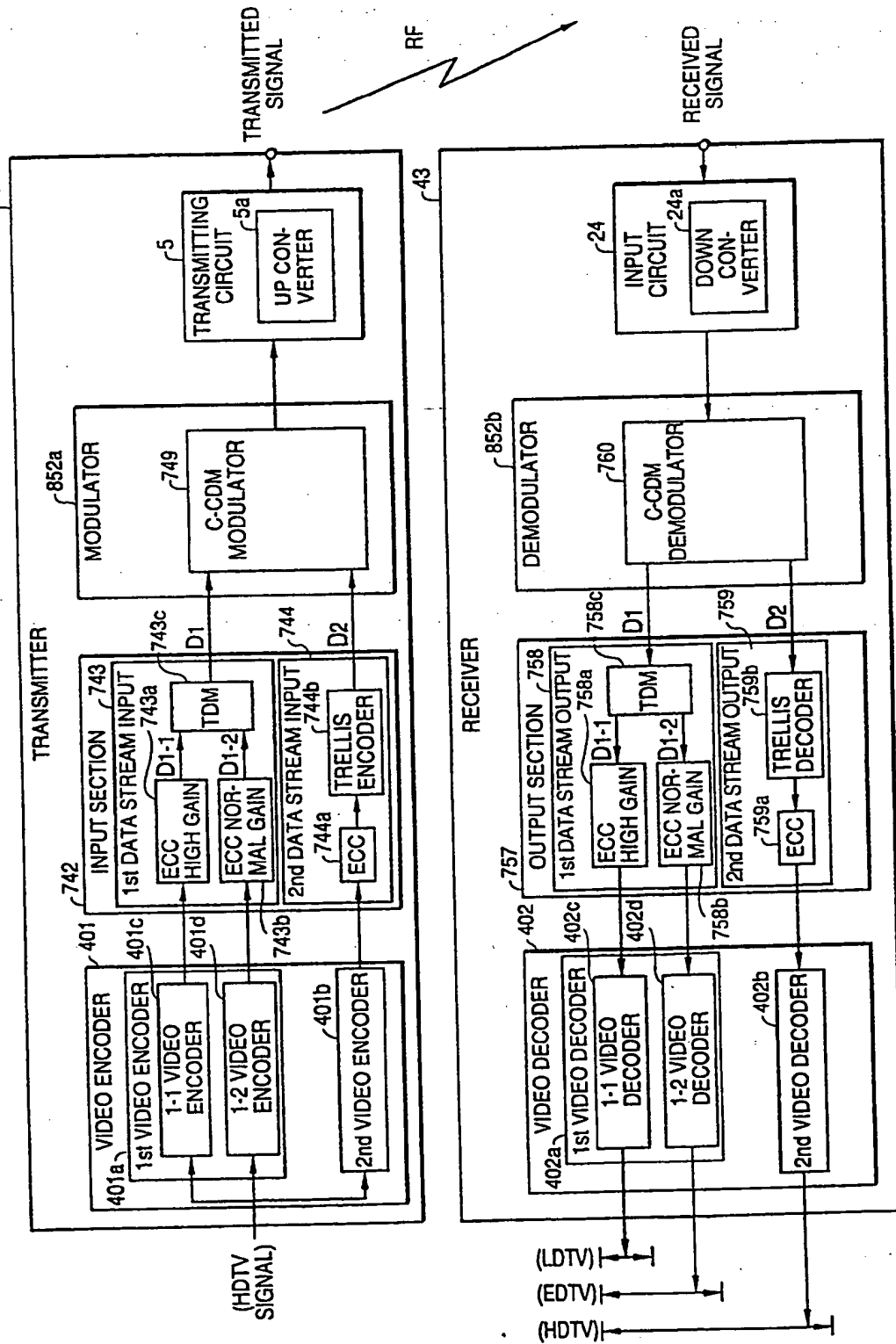


FIG. 134

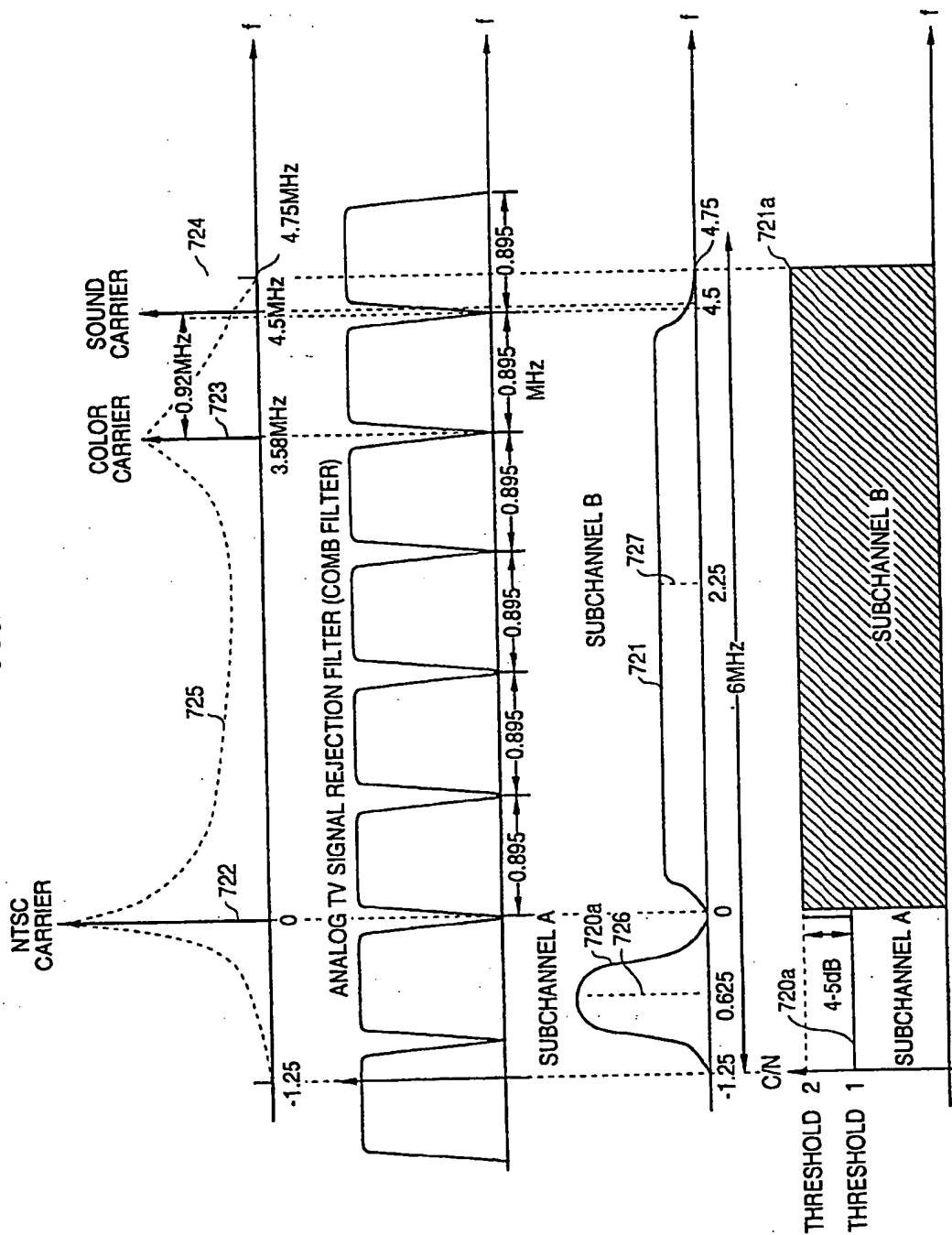


FIG. 135

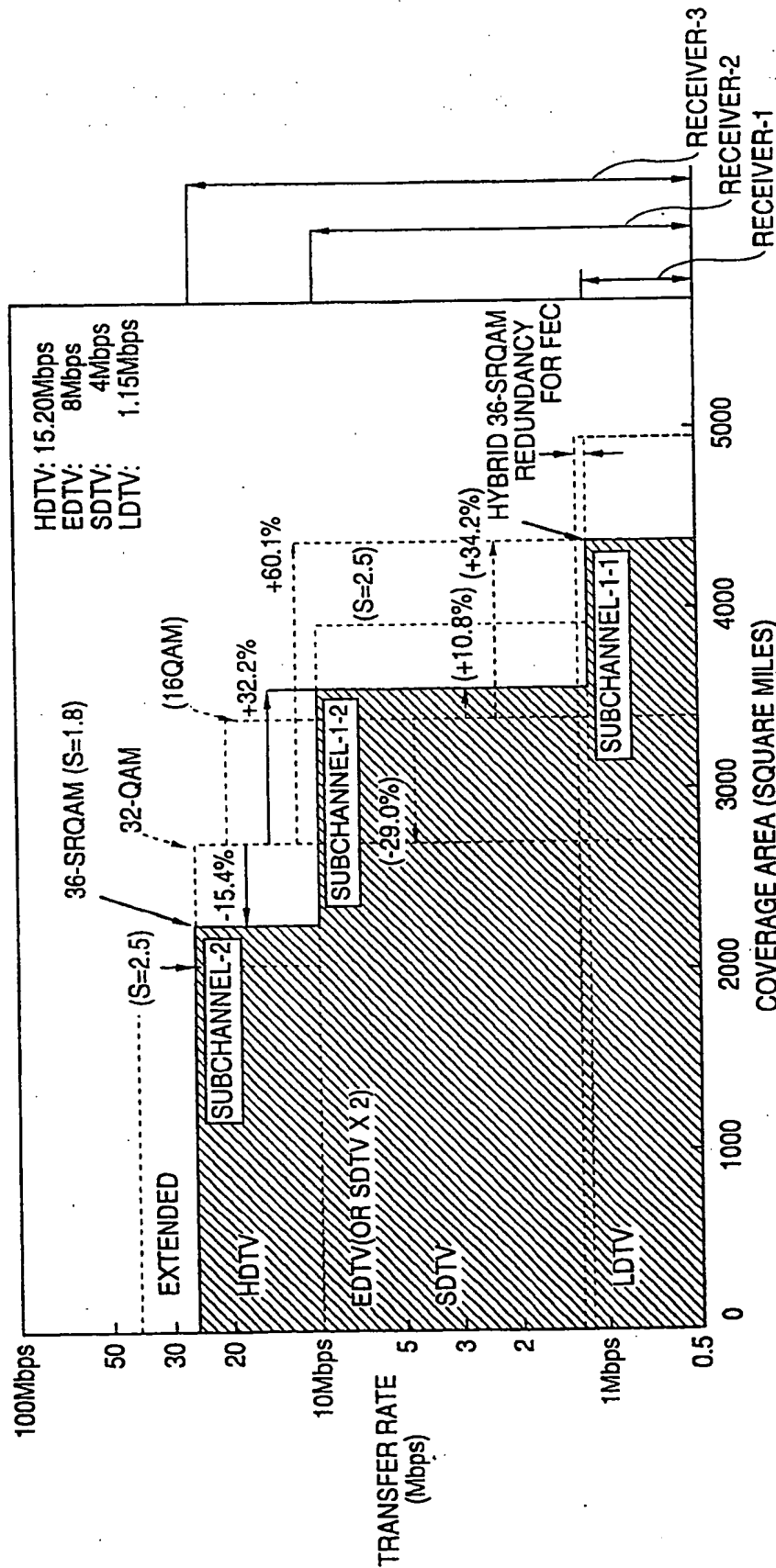


FIG. 136

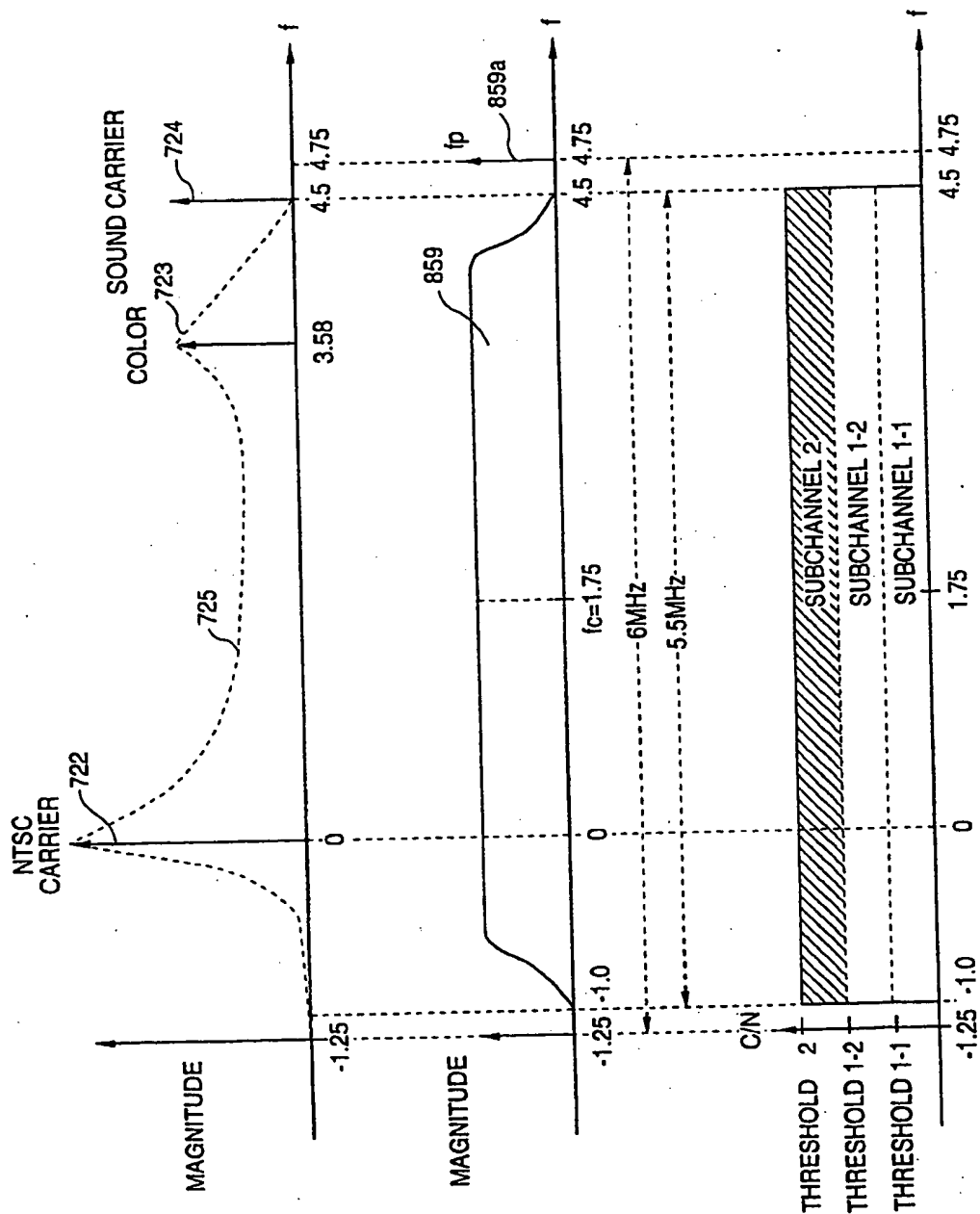


FIG. 137

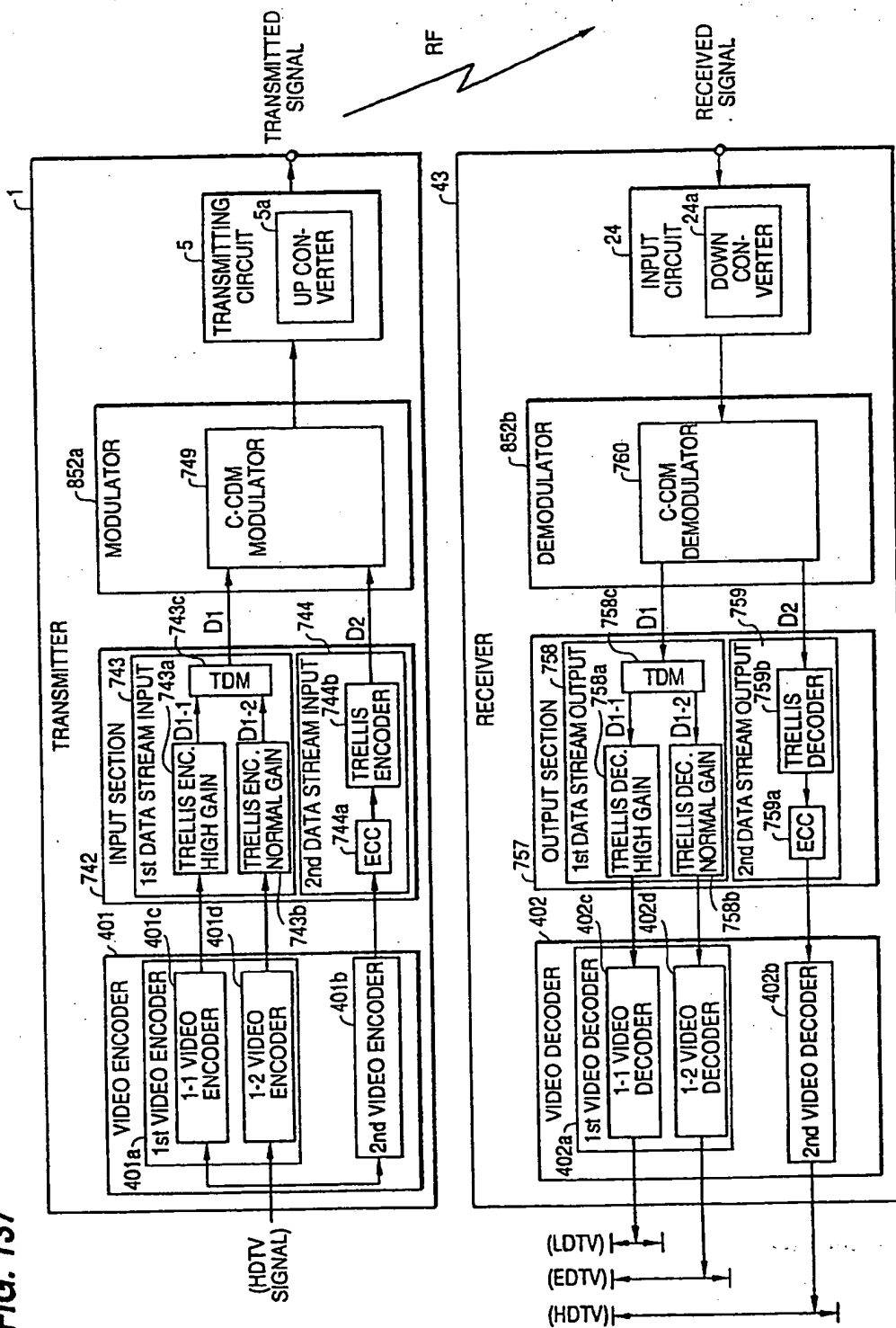


FIG. 138

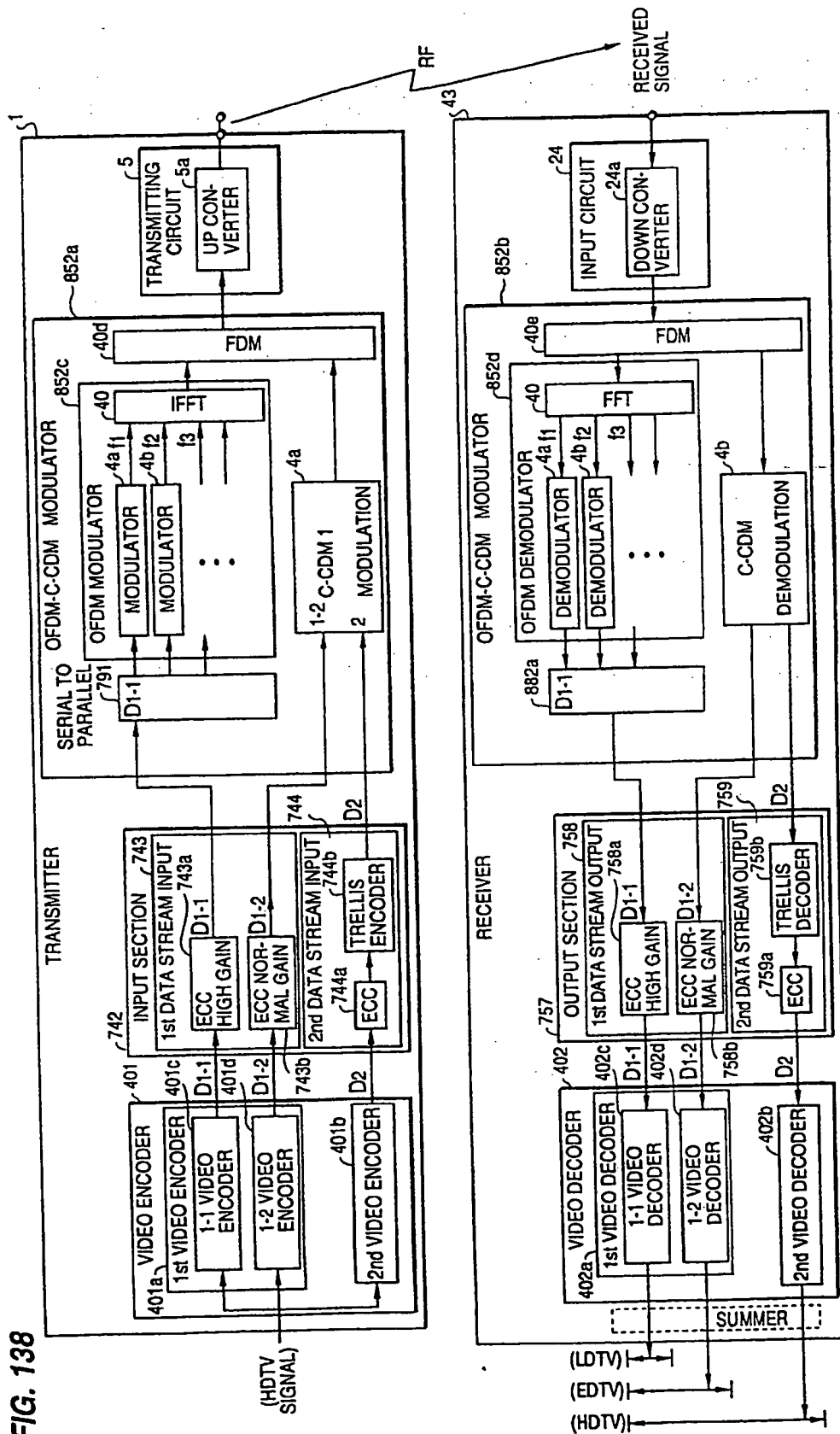


FIG. 139

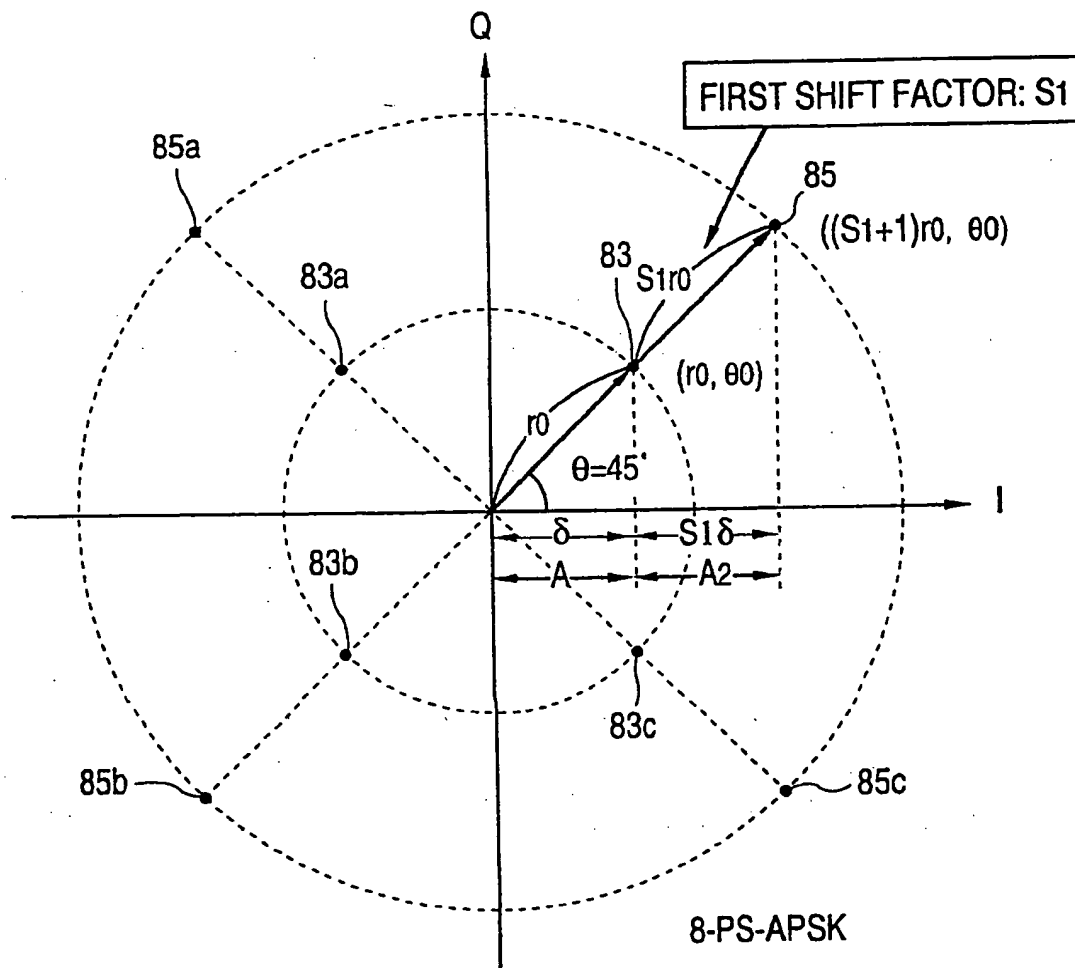


FIG. 140

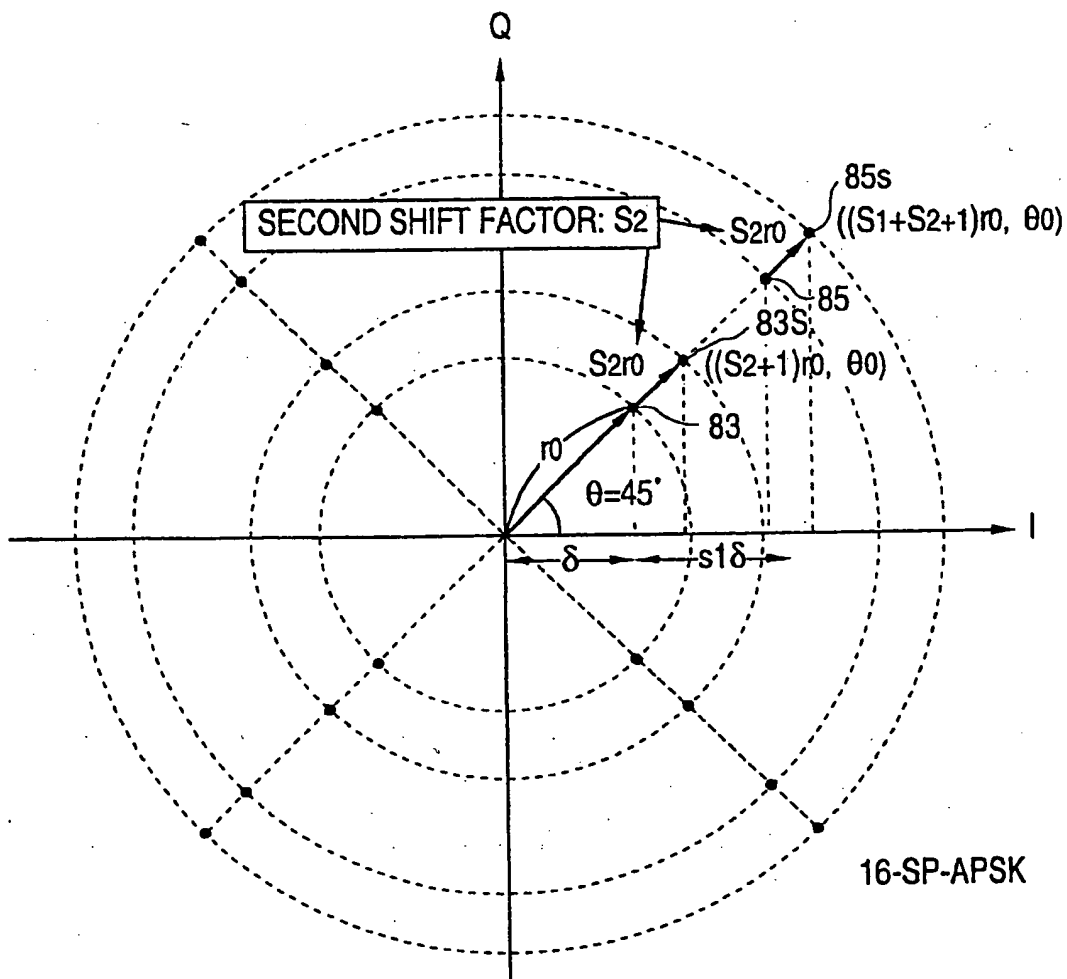


FIG. 141

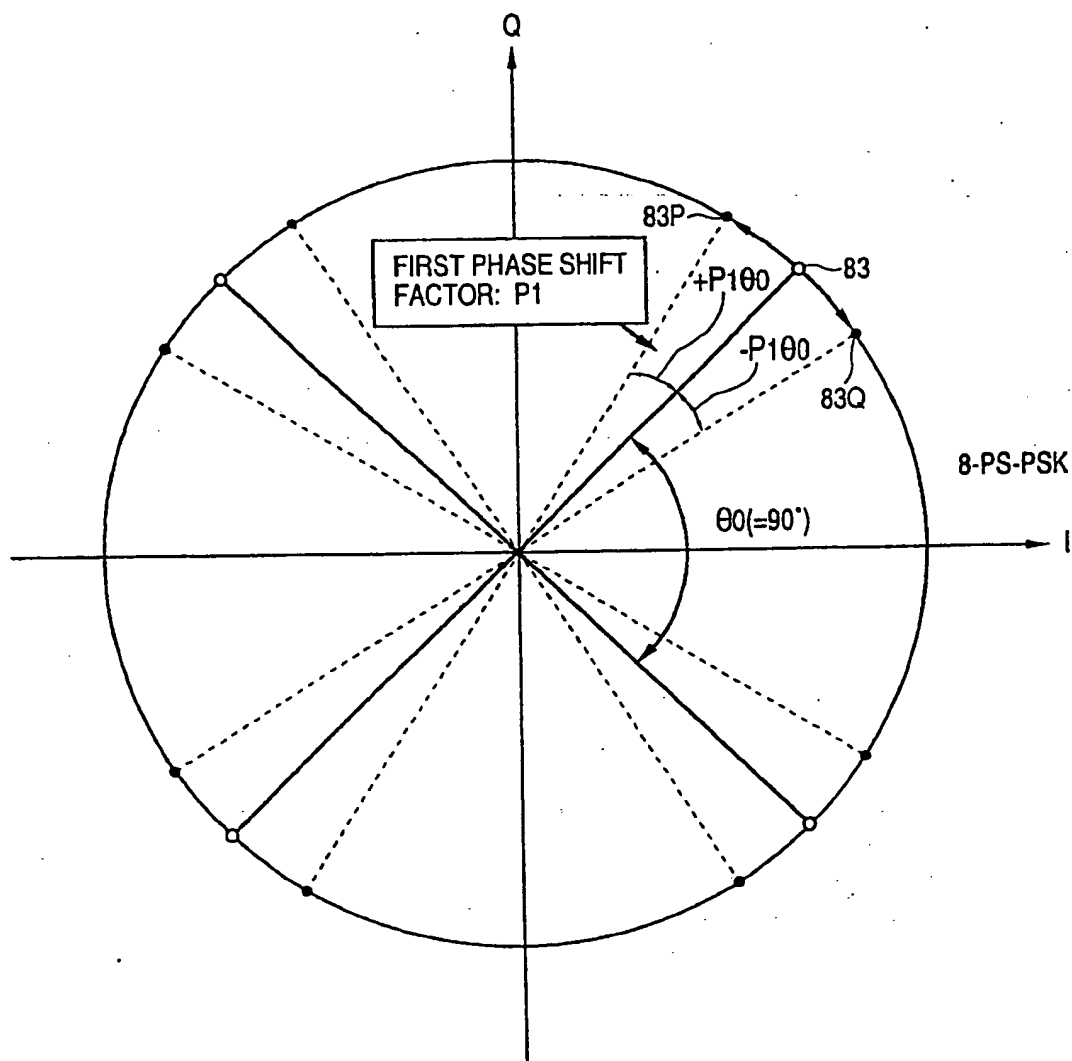


FIG. 142

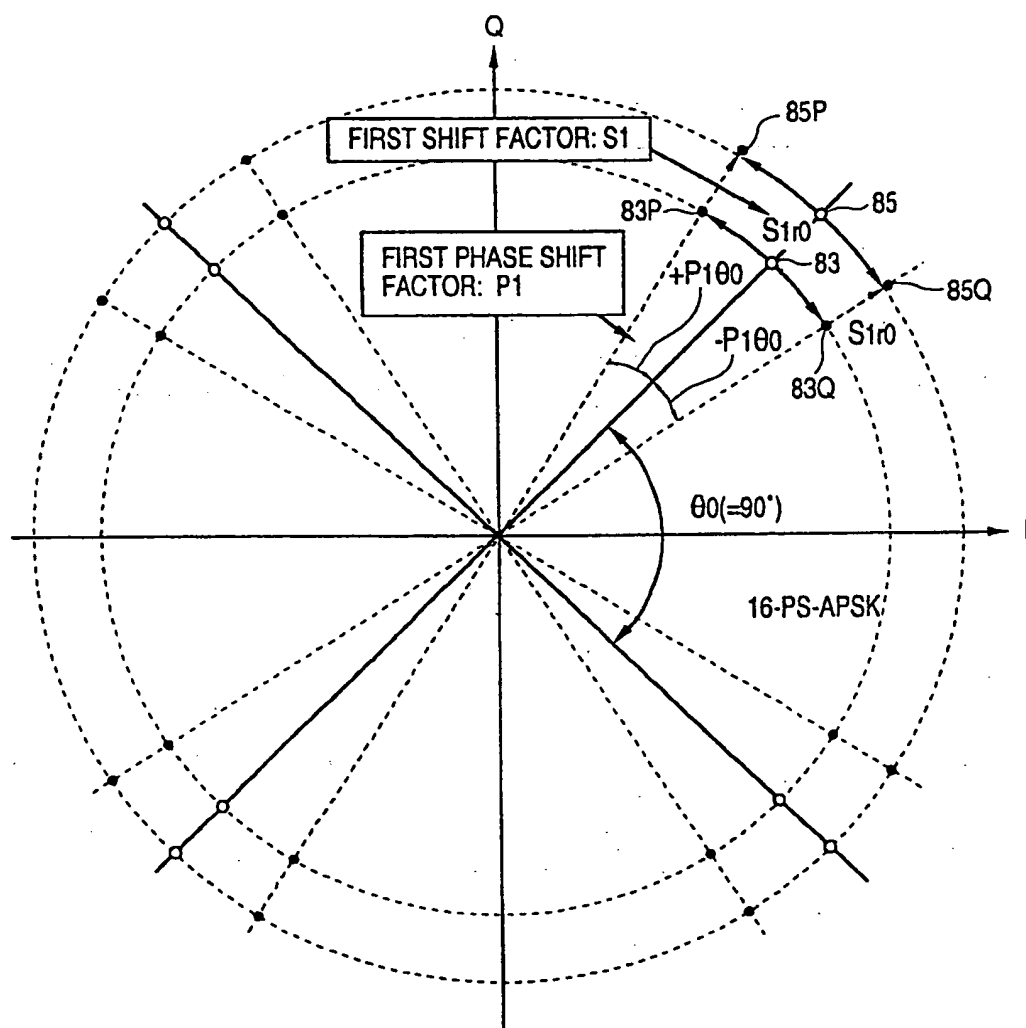


FIG. 143

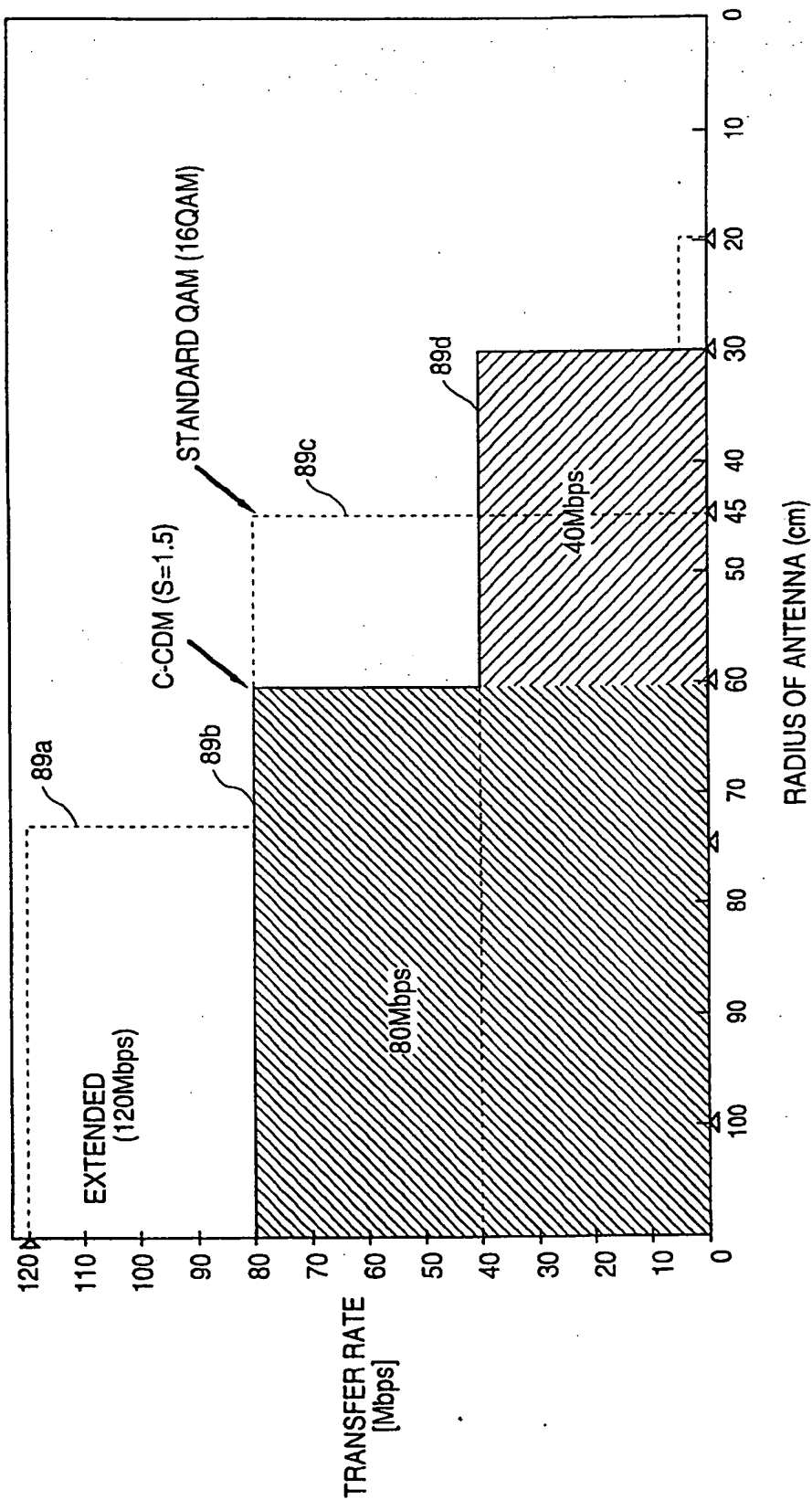
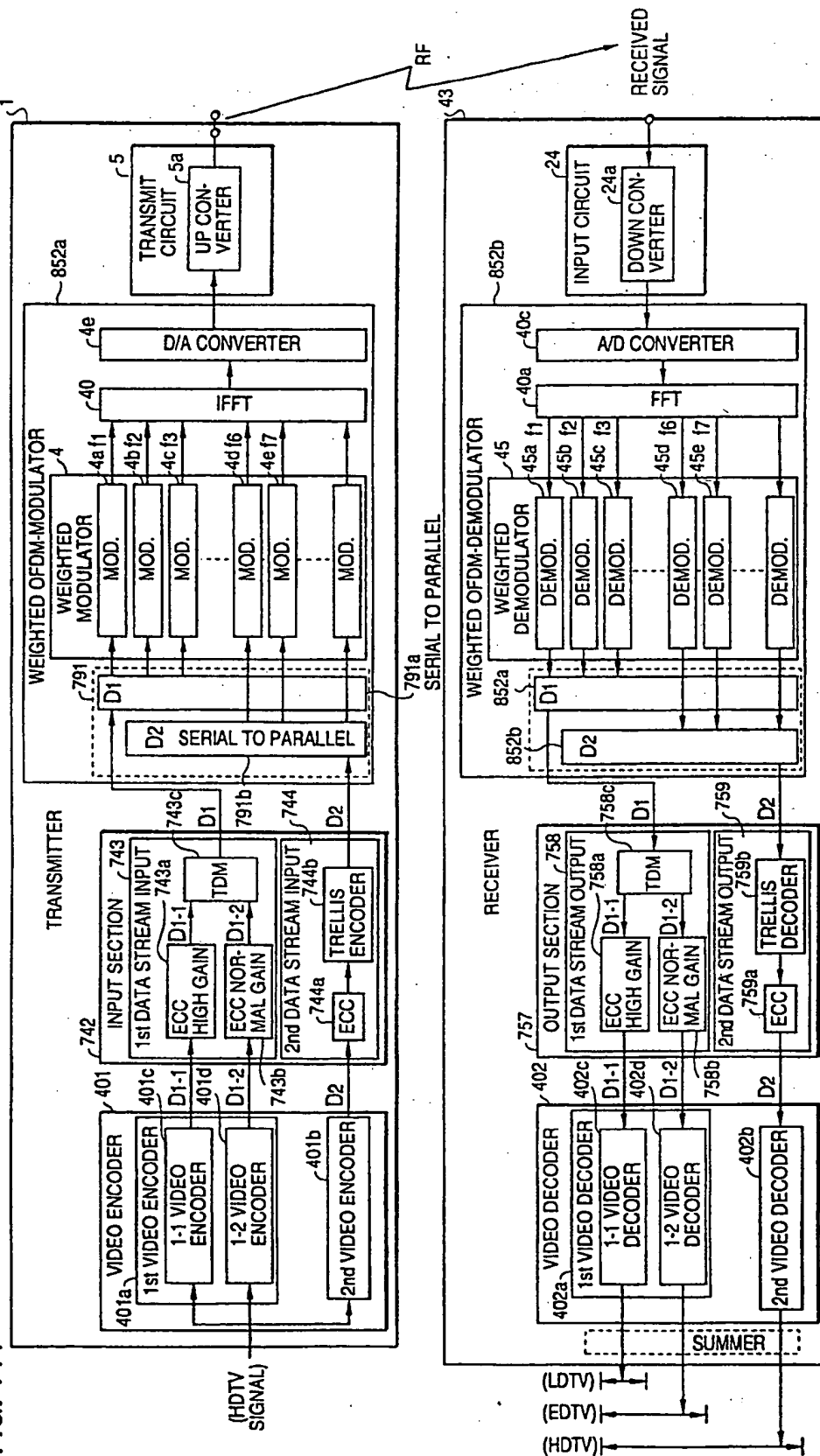


FIG. 144



Timing diagram for a four-bit shift register. The diagram shows four clock cycles labeled 811a, 811b, 811c, and 811d. Each cycle has a setup time (tsa or tsb) and a hold time (tga or tgb). The data input is 'A' and the data output is 'B'. The setup and hold times are indicated by arrows above the clock signal.

FIG. 146

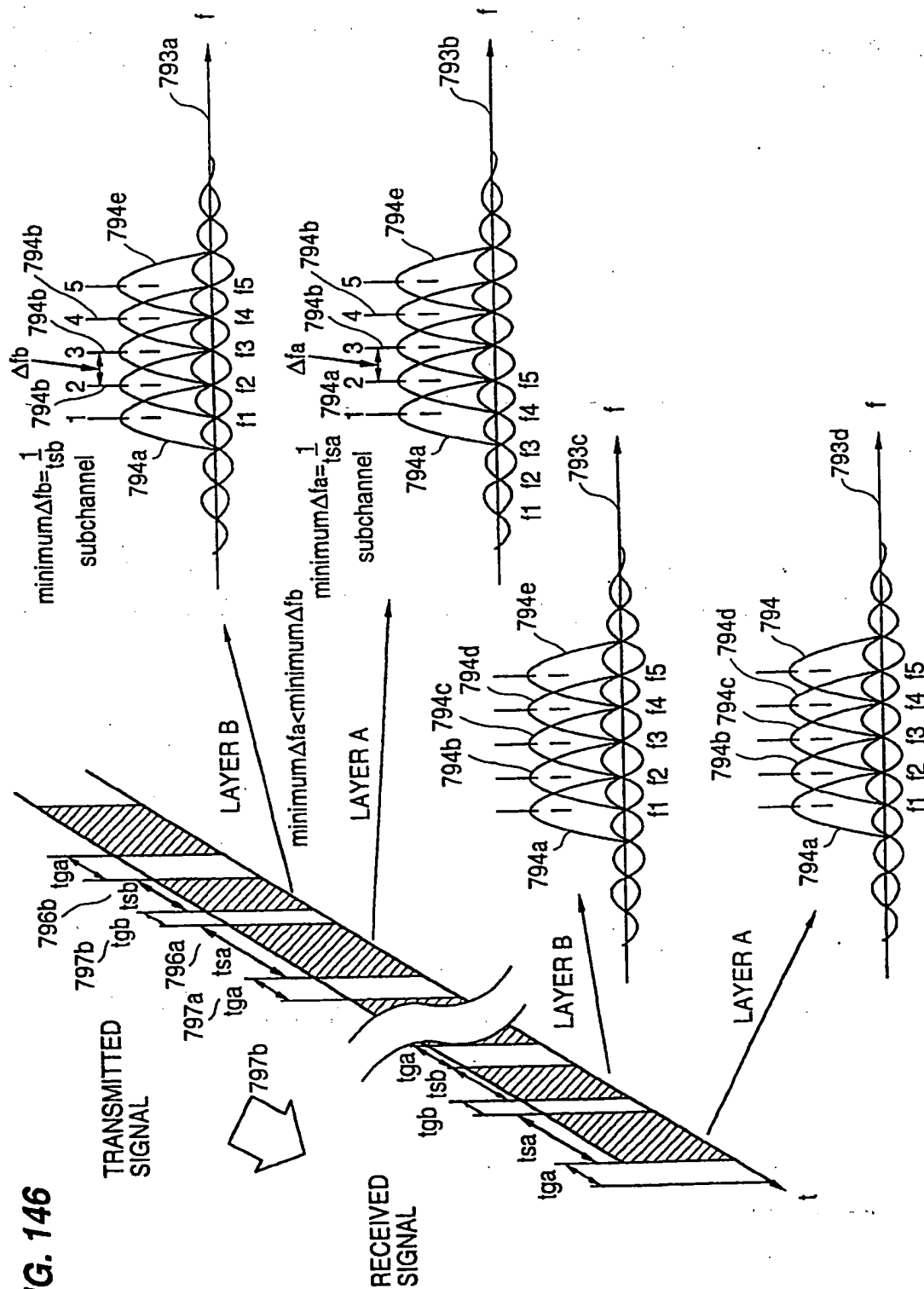


FIG. 147

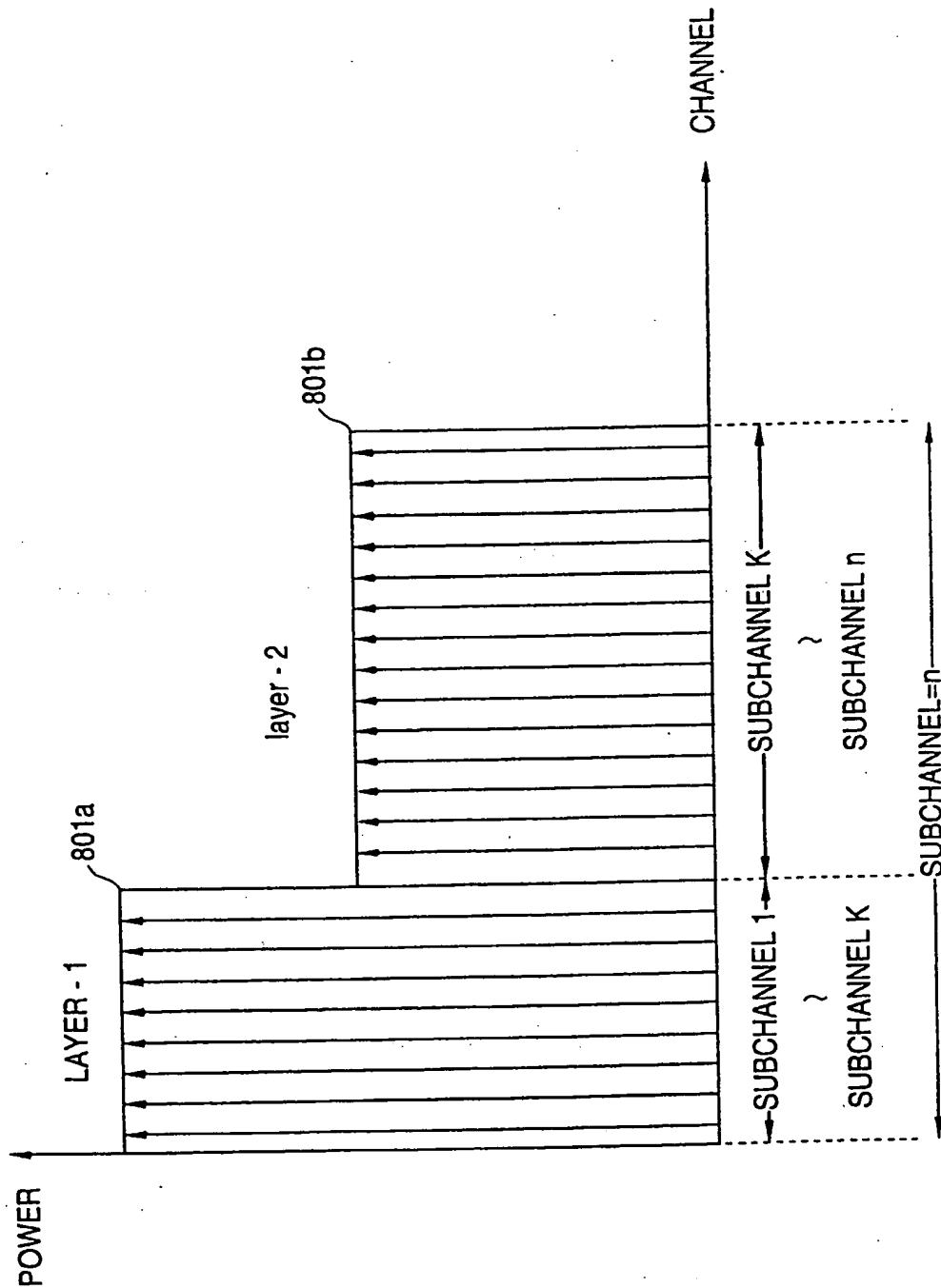


FIG. 148

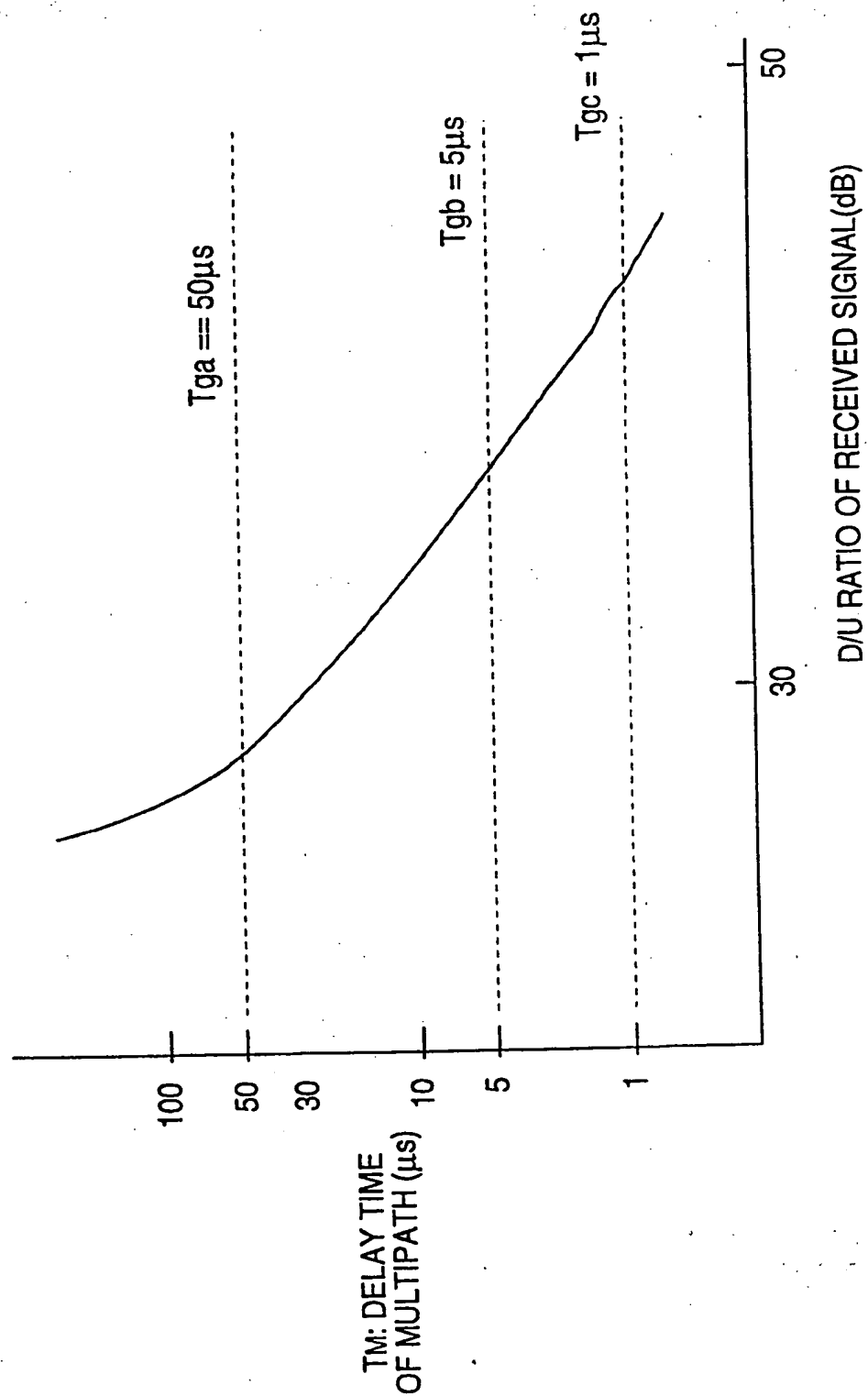


FIG. 149(c)

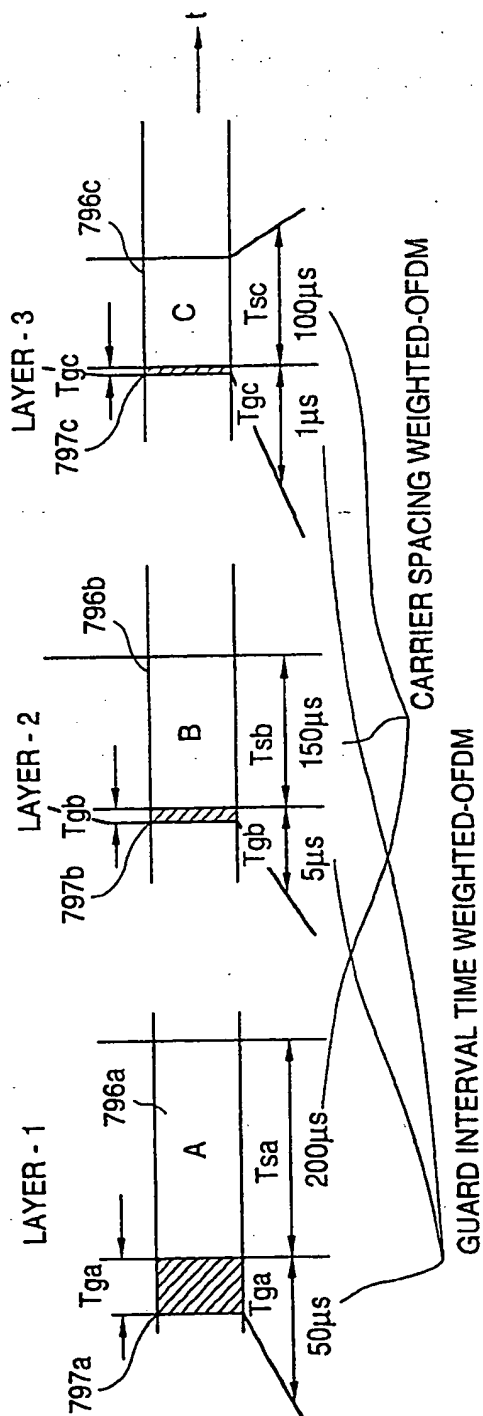


FIG. 150

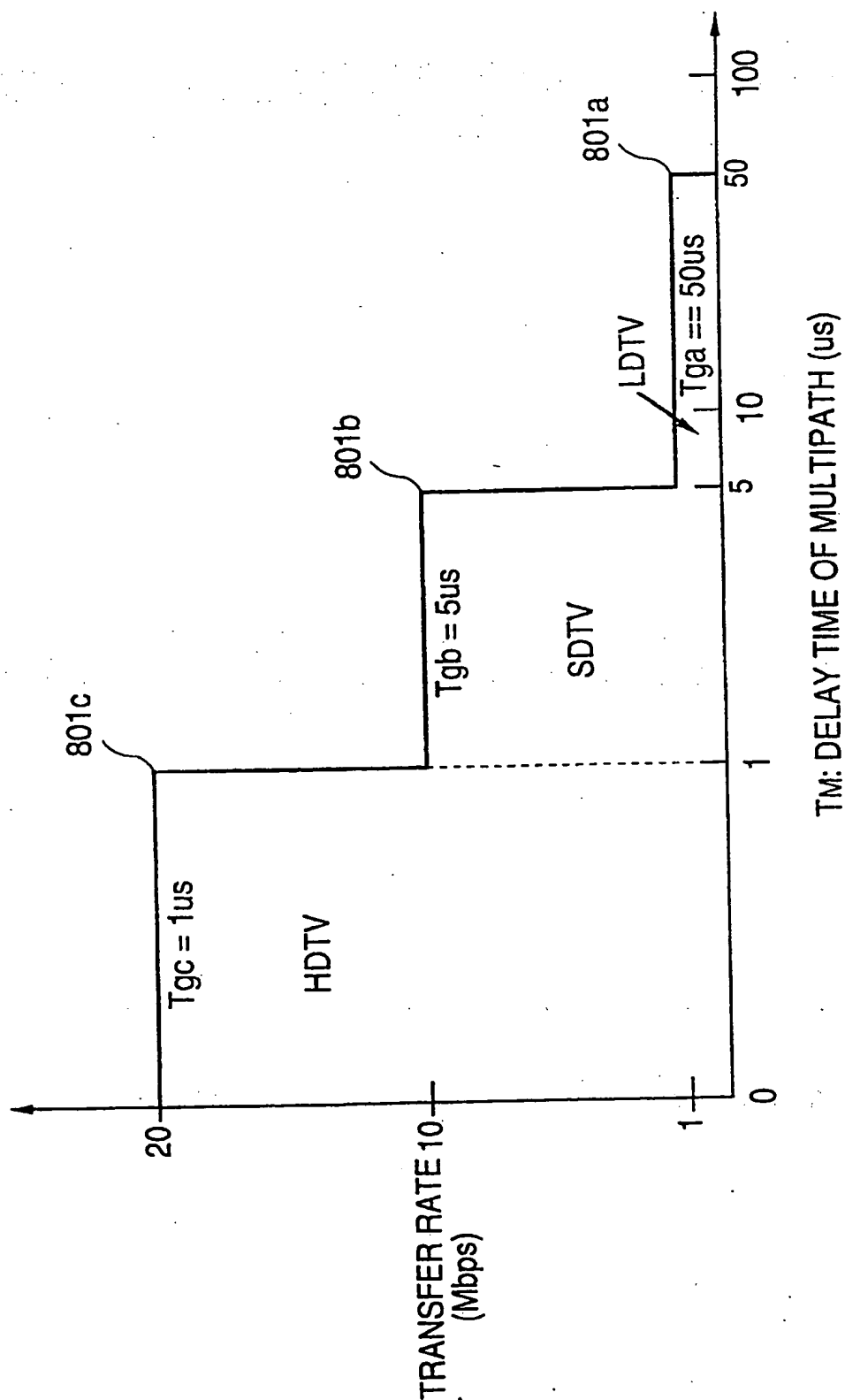


FIG. 151

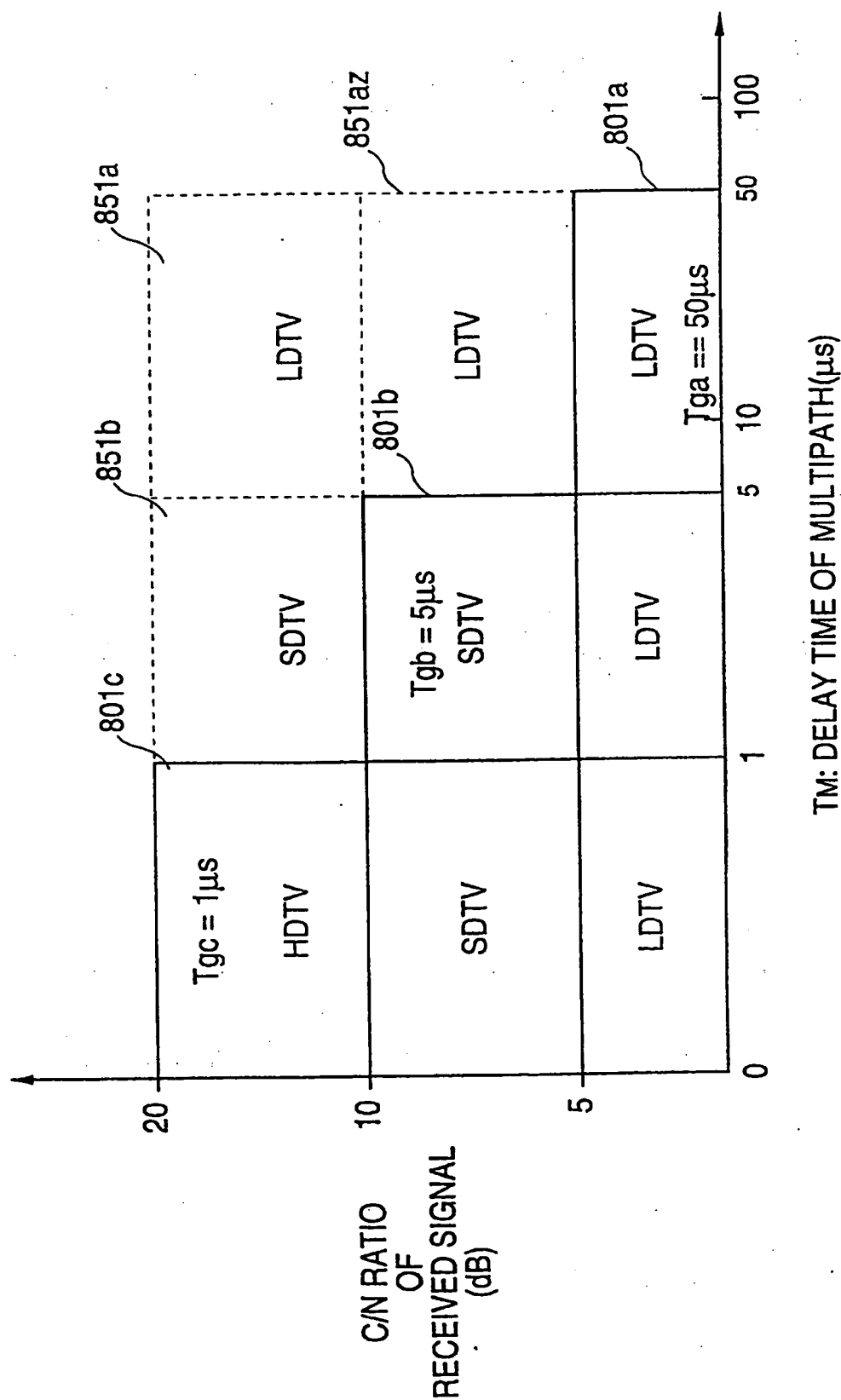


FIG. 152

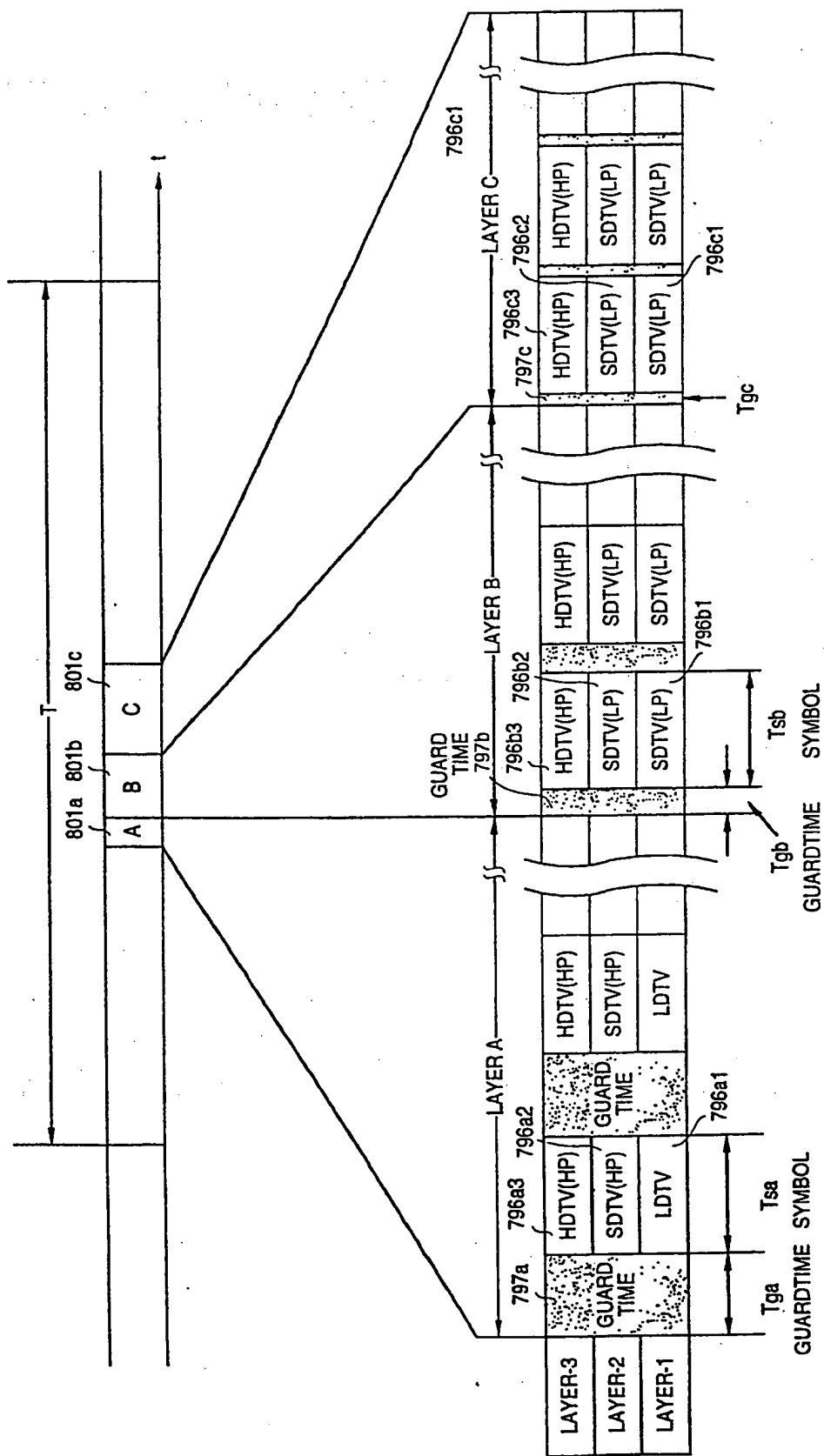


FIG. 153

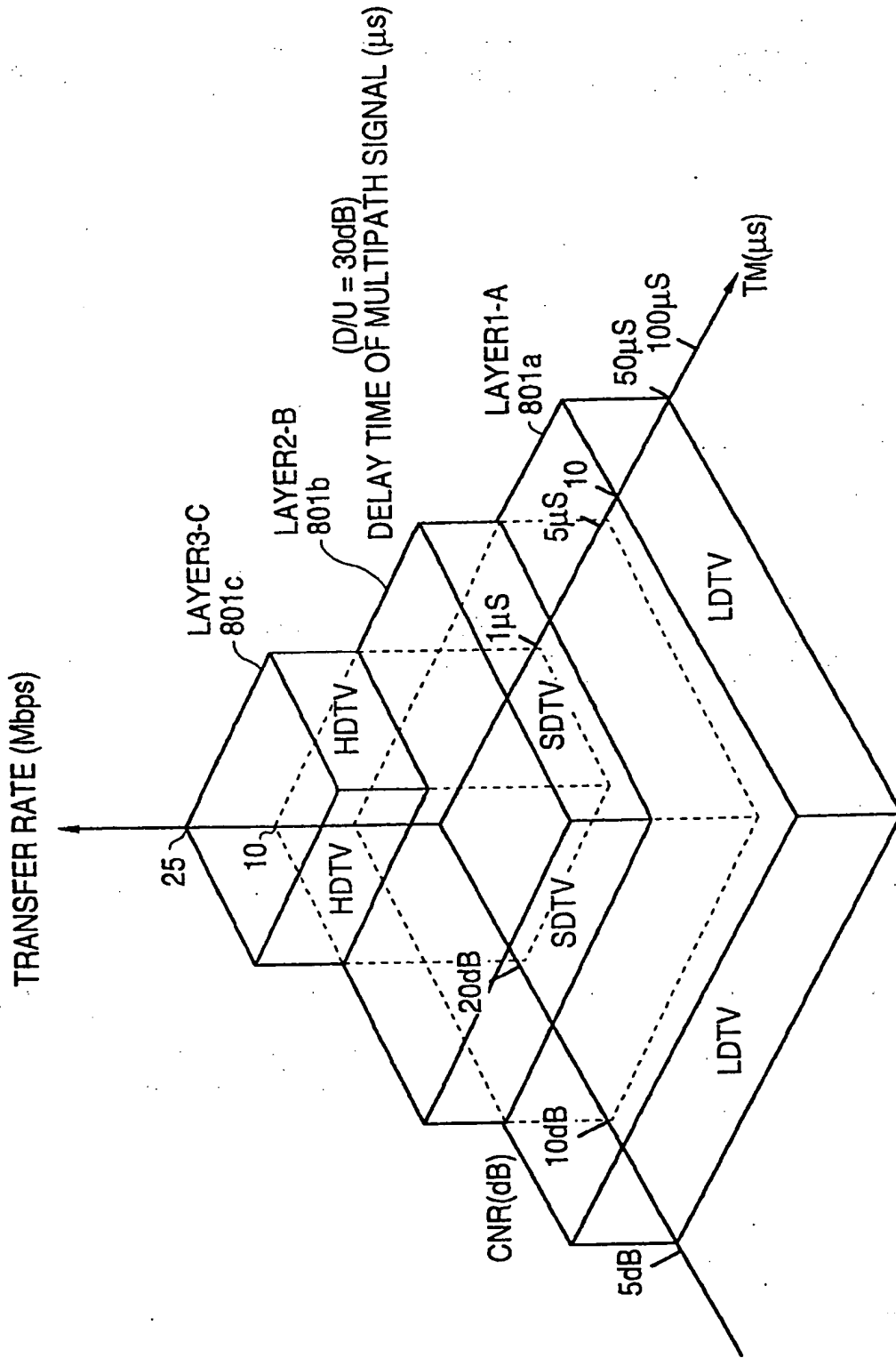


FIG. 154(a)

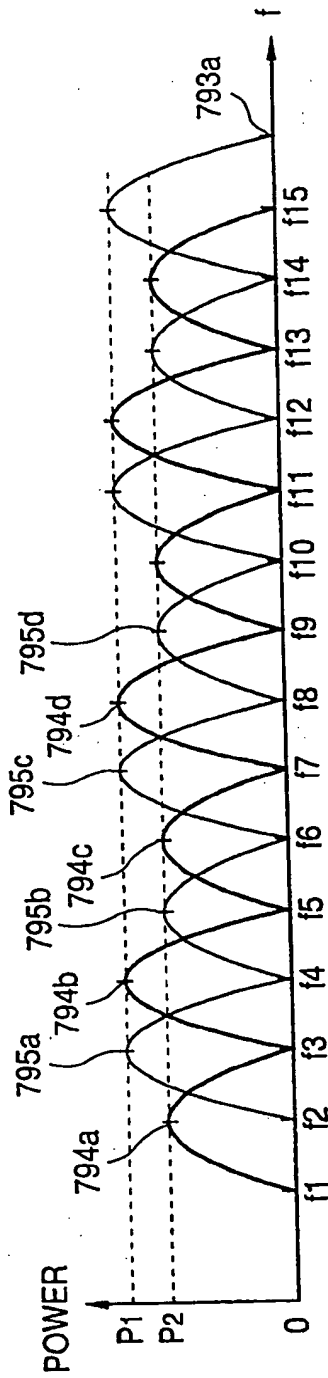


FIG. 154(b)

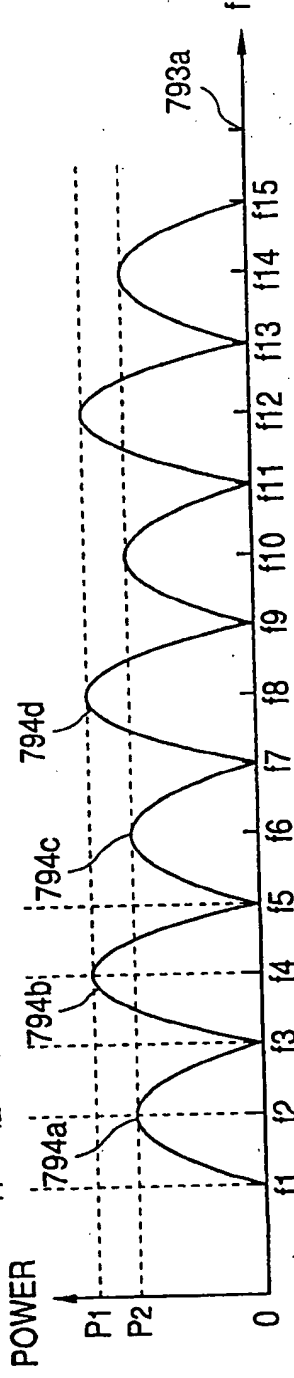
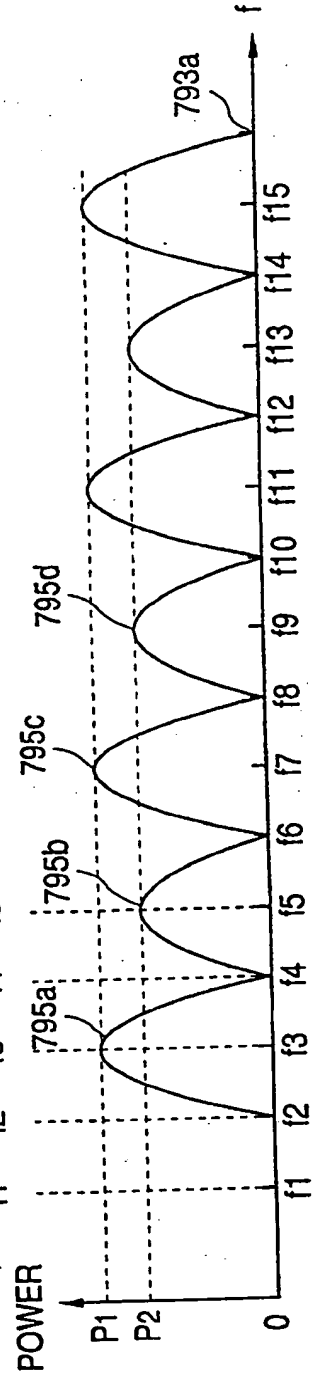


FIG. 154(c)



The diagram illustrates the timing of a multi-layer video signal. A horizontal timeline at the top is divided into three main sections: 801a, 801b, and 801c, with a total duration T. Section 801a contains sub-sections A, B, and C. Section 801b contains sub-sections C, A, B, and C. Section 801c contains sub-sections A, B, and C. Three callout boxes provide detailed views of these sections:

- LAYER A:** Shows a sequence of HDTV(HP) (796a3), SDTV(HP) (796a2), and LDTV (796a1) symbols. It includes a GUARD TIME (797a) and a total symbol duration T_{sa}.
- LAYER B:** Shows a sequence of HDTV(HP) (796b3), SDTV(LP) (796b2), and SDTV(LP) (796b1) symbols. It includes a GUARD TIME (797b) and a total symbol duration T_{sb}.
- LAYER C:** Shows a sequence of HDTV(HP) (796c3), SDTV(LP) (796c2), and SDTV(LP) (796c1) symbols. It includes a GUARD TIME (797c) and a total symbol duration T_{sc}.

The diagram uses various patterns to represent different signal types: solid for HDTV(HP), dotted for SDTV(LP), and horizontal lines for LDTV. The timeline is marked with 't' at the top and bottom.

FIG. 156

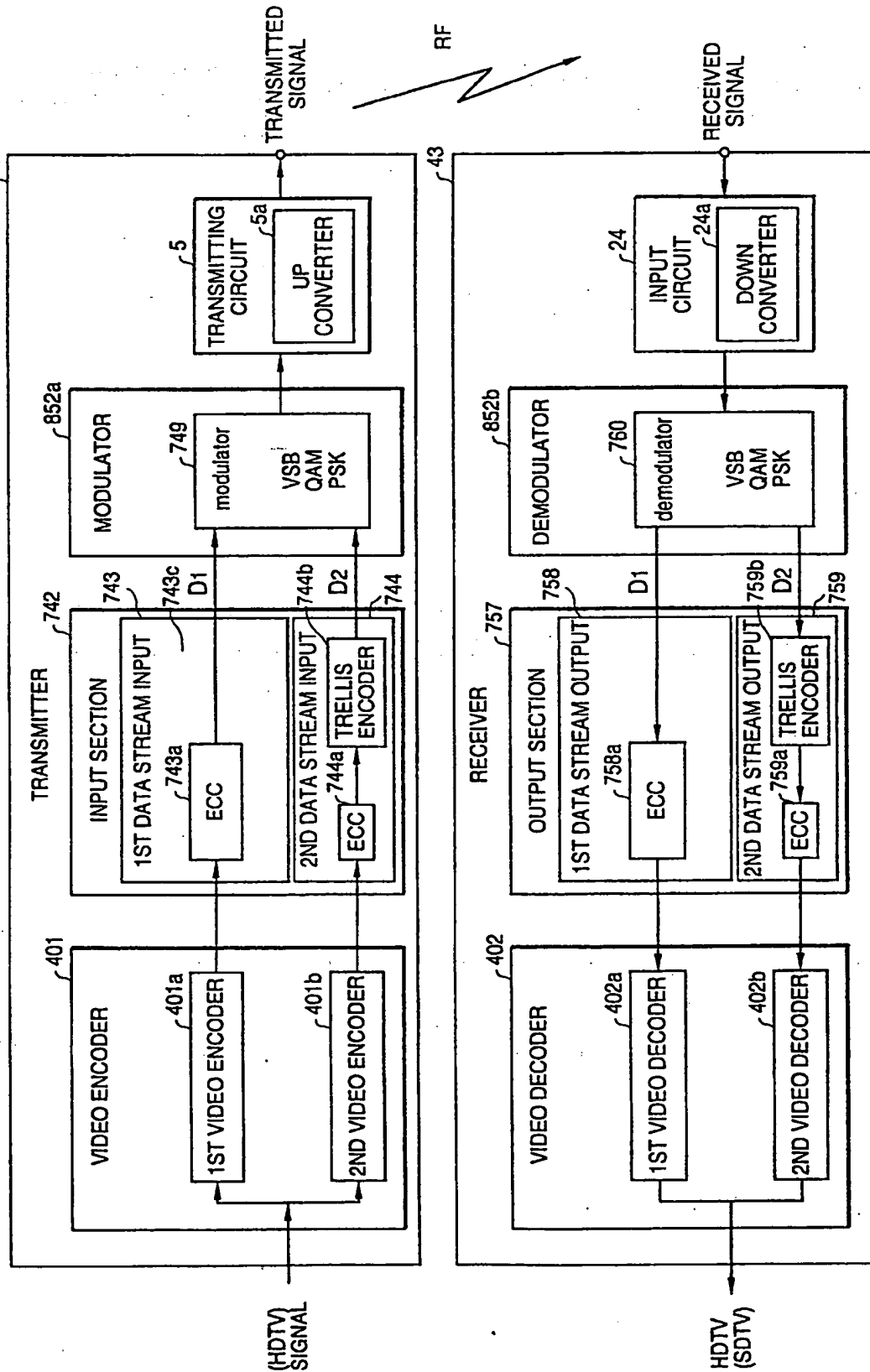


FIG. 157

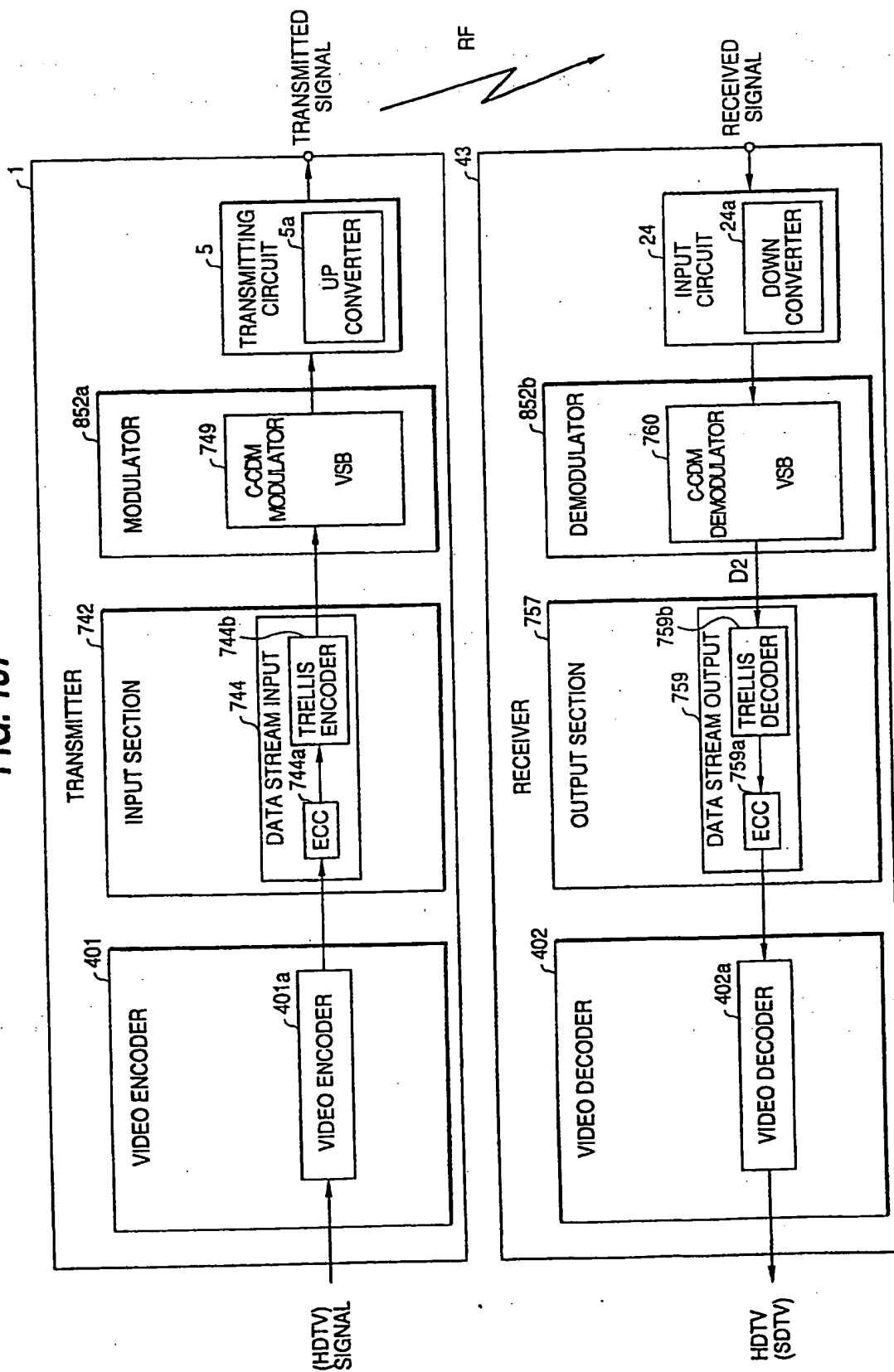
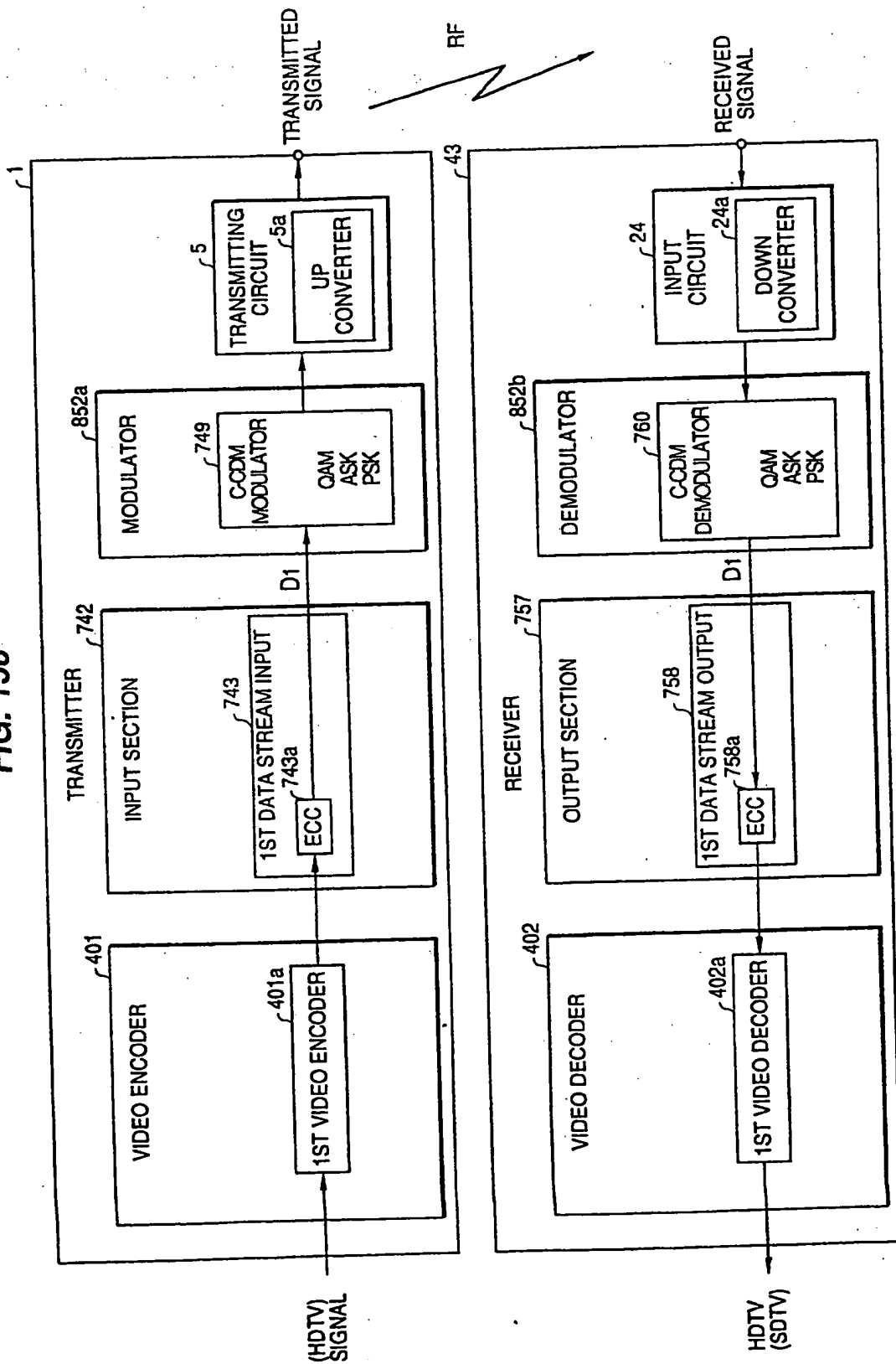


FIG. 158



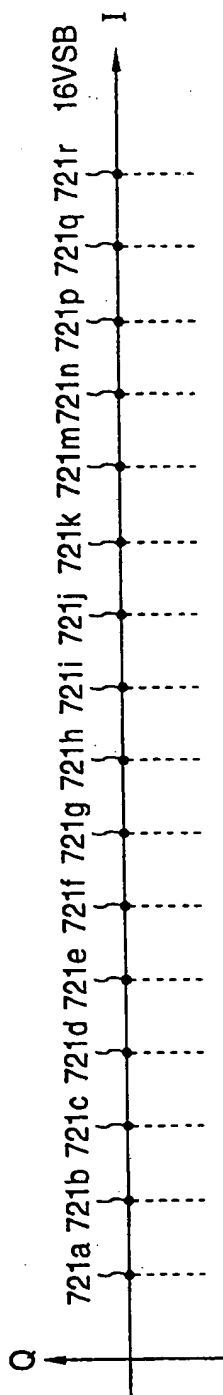


FIG. 159(a)

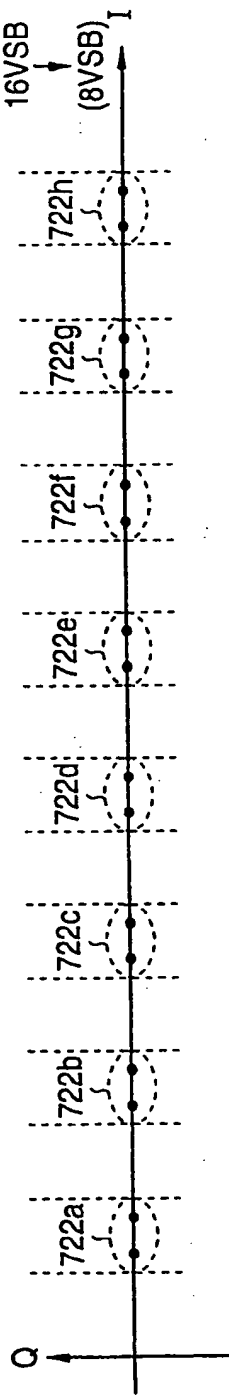


FIG. 159(b)

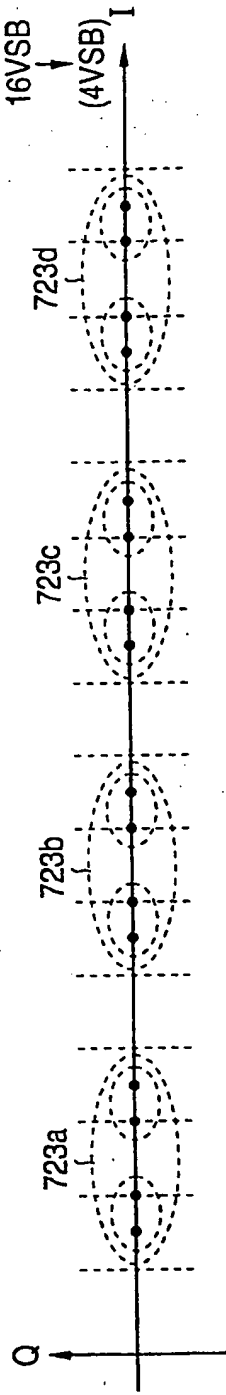


FIG. 159(c)

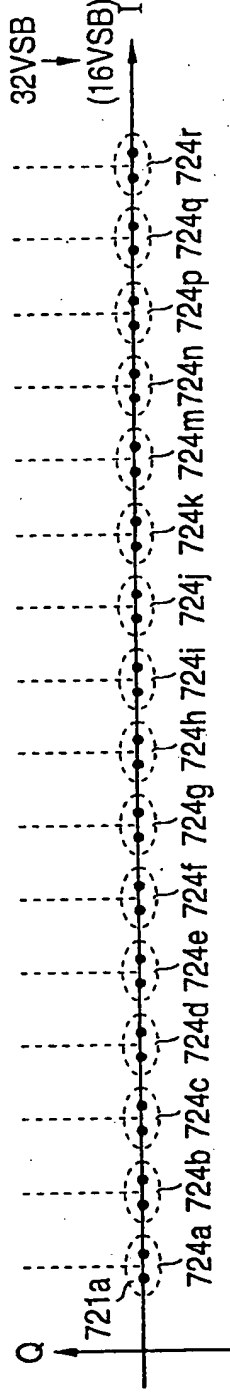


FIG. 159(d)

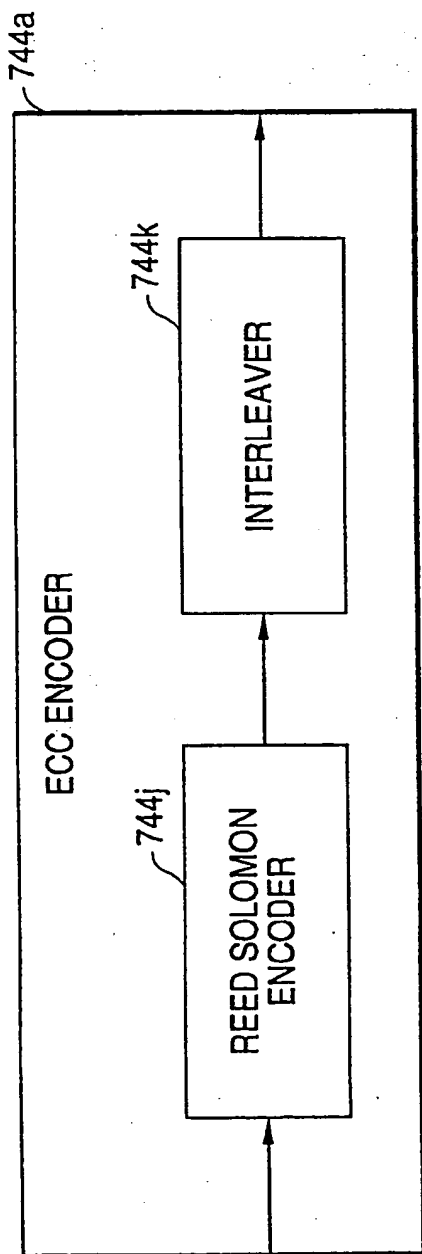


FIG. 160(a)

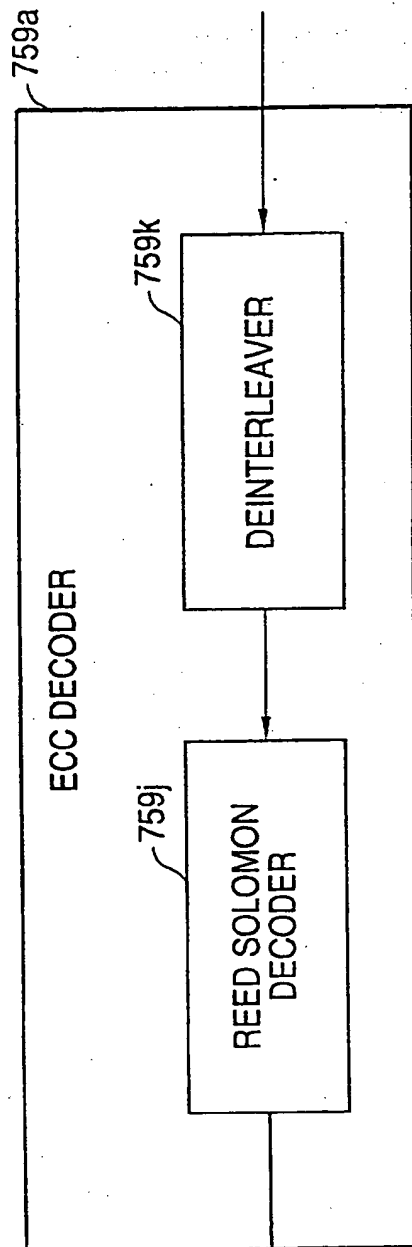


FIG. 160(b)

FIG. 161

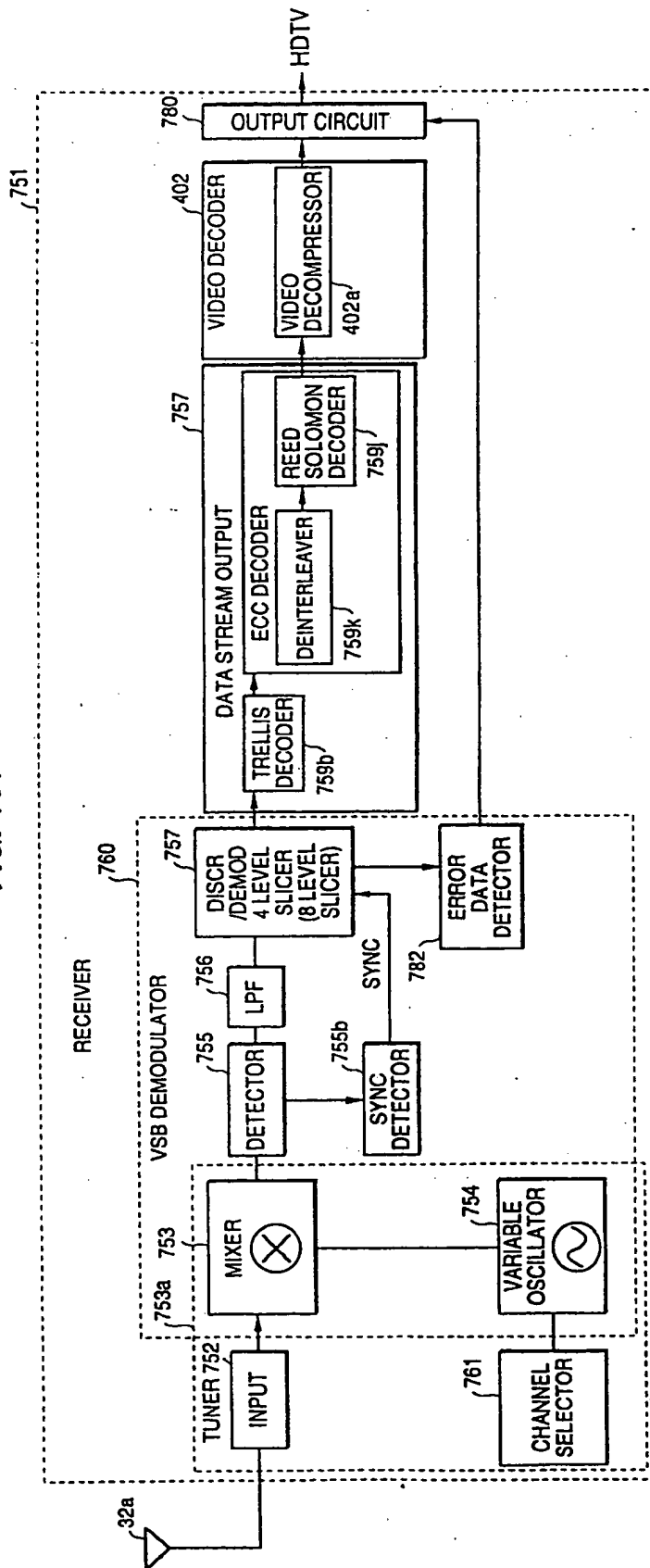


FIG. 162

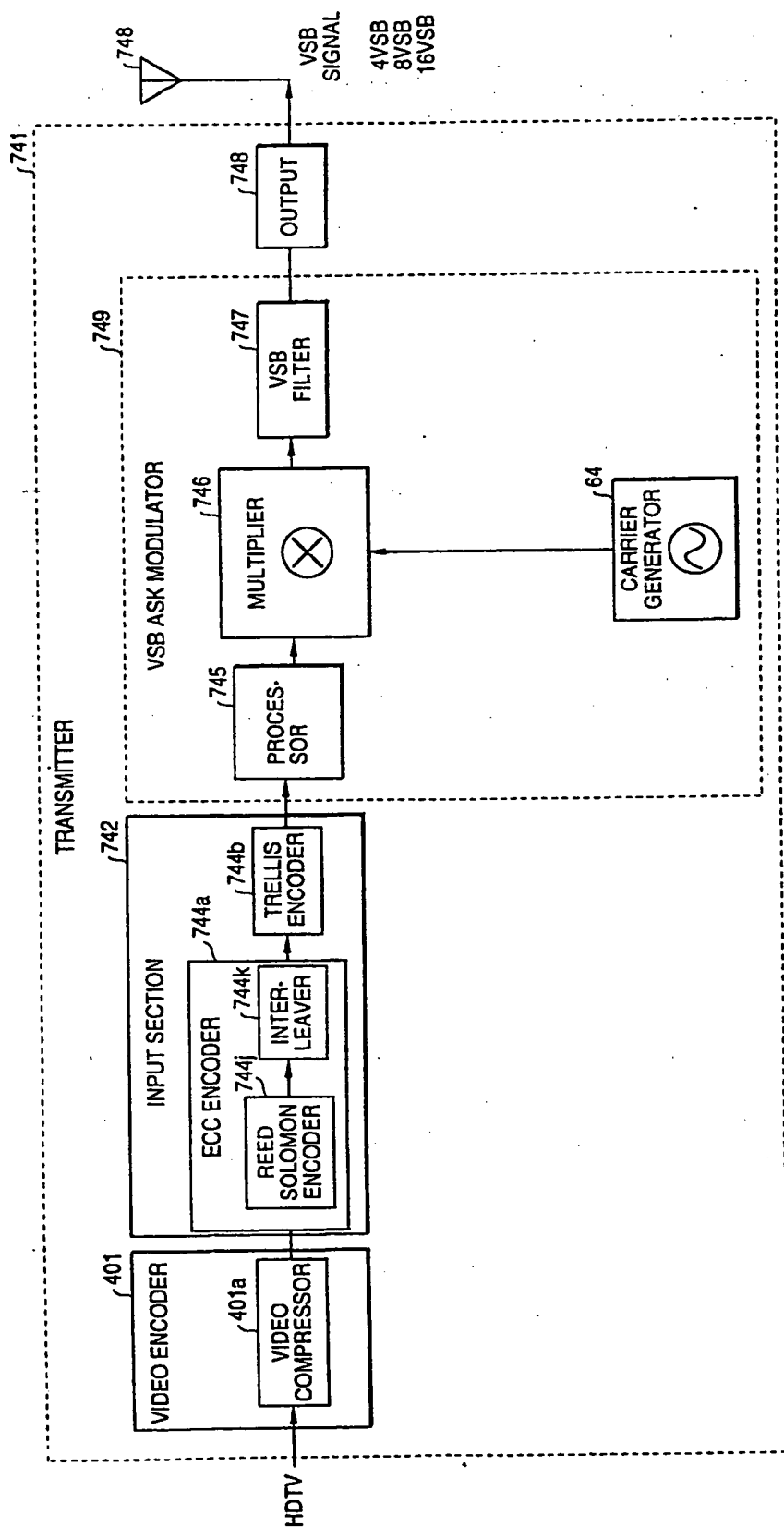


FIG. 163

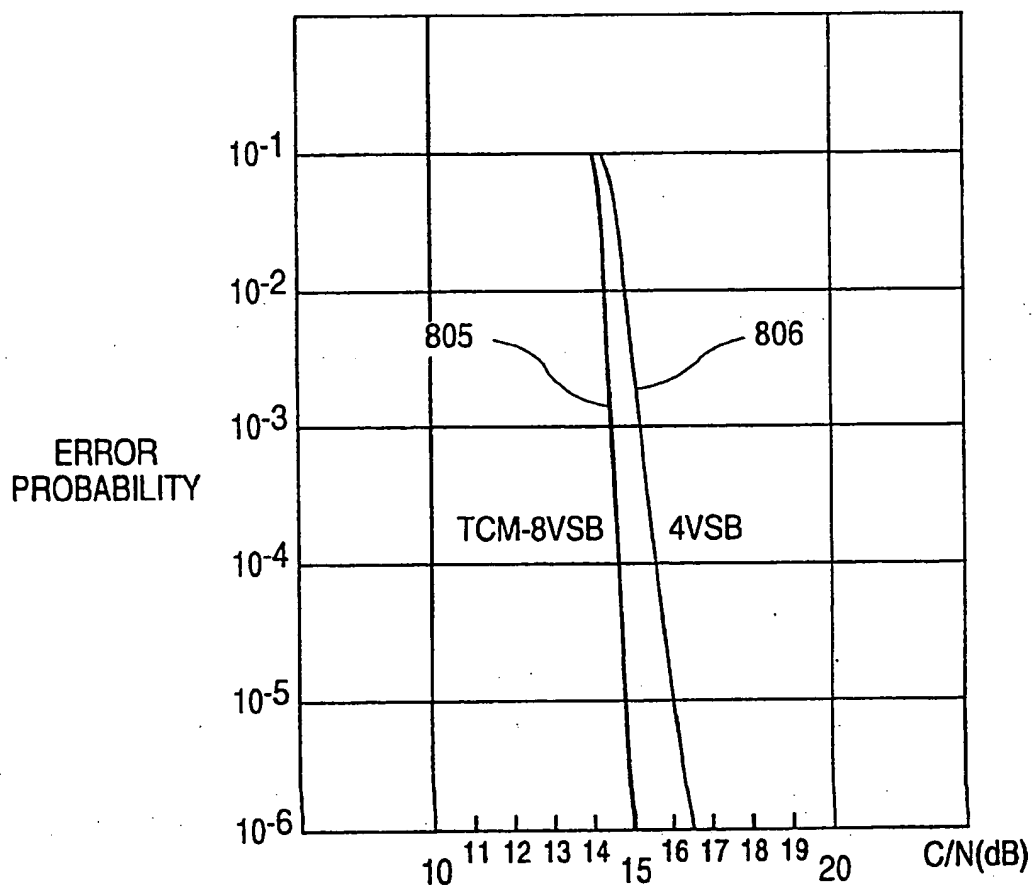


FIG. 164

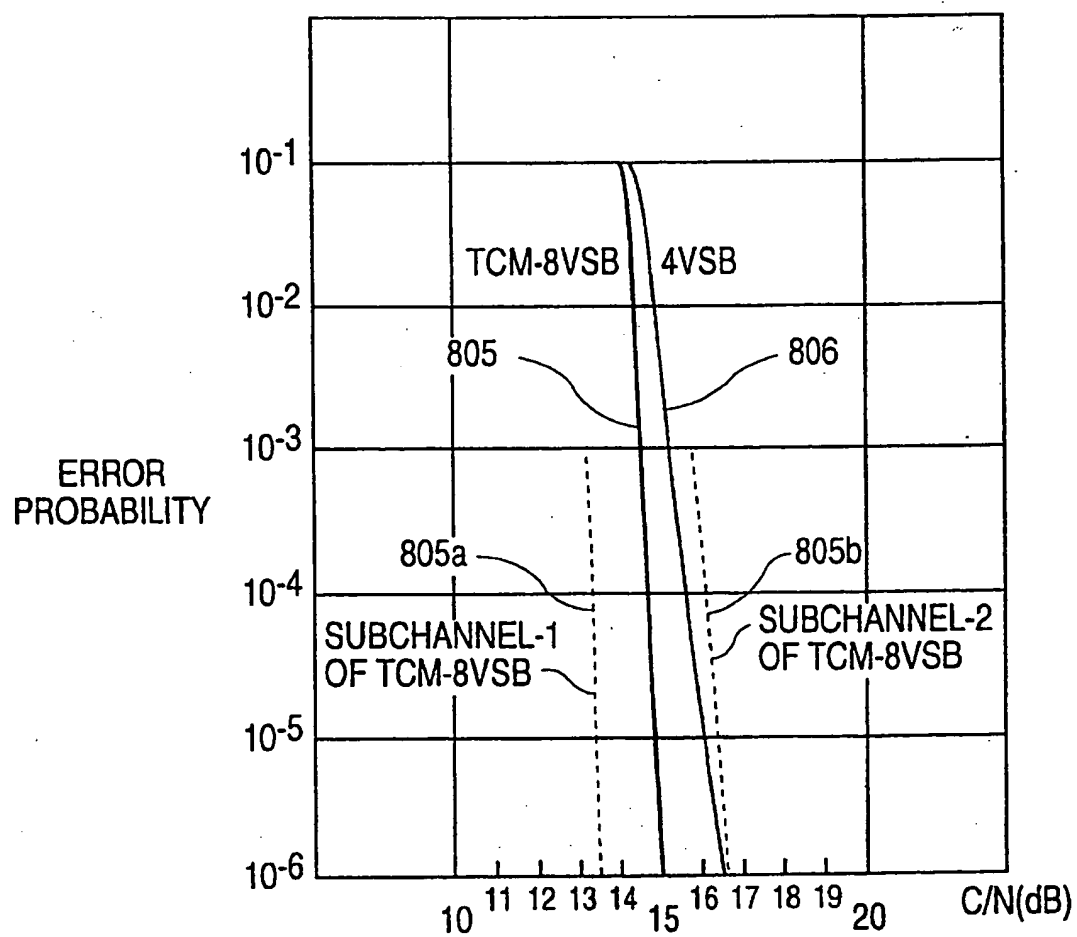


FIG. 165(a)

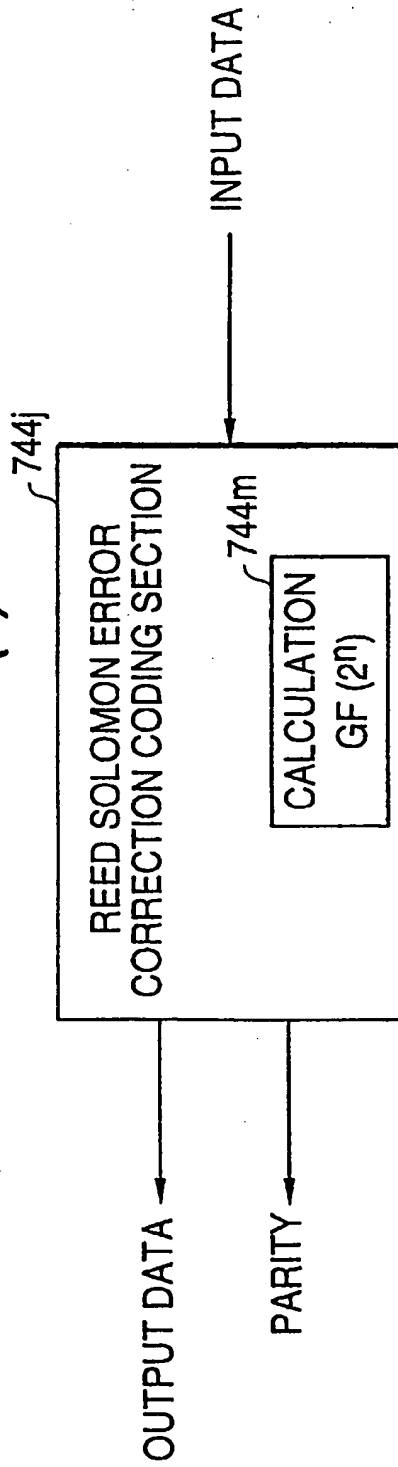


FIG. 165(b)

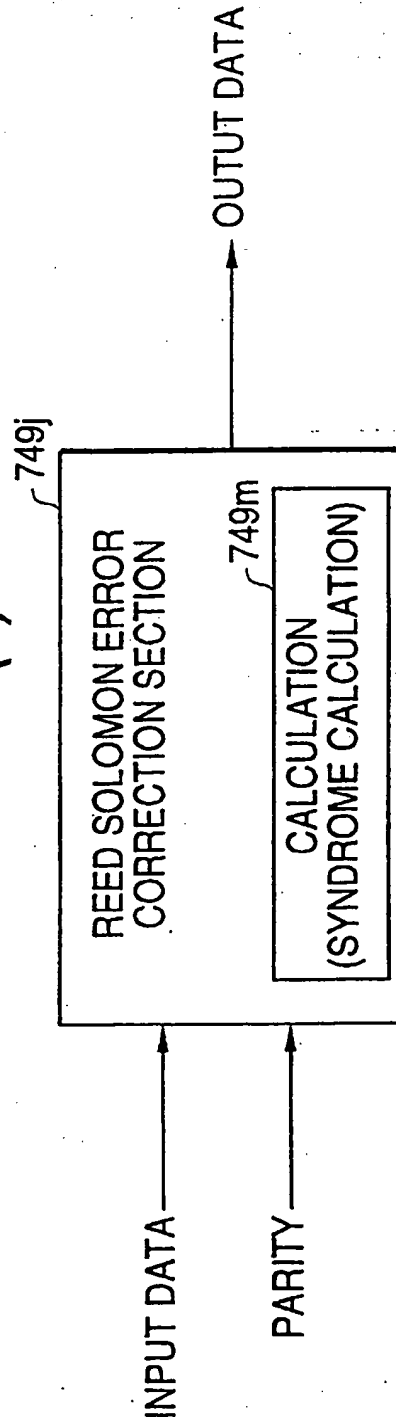


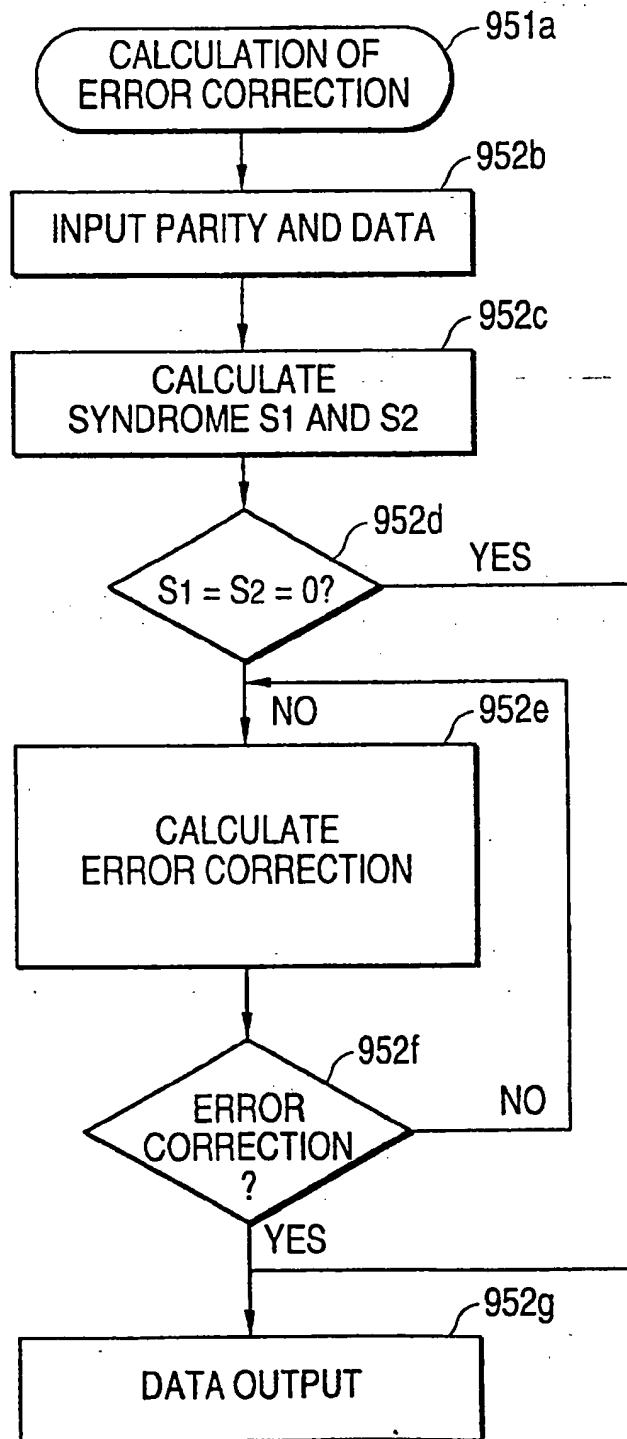
FIG. 166

FIG. 167

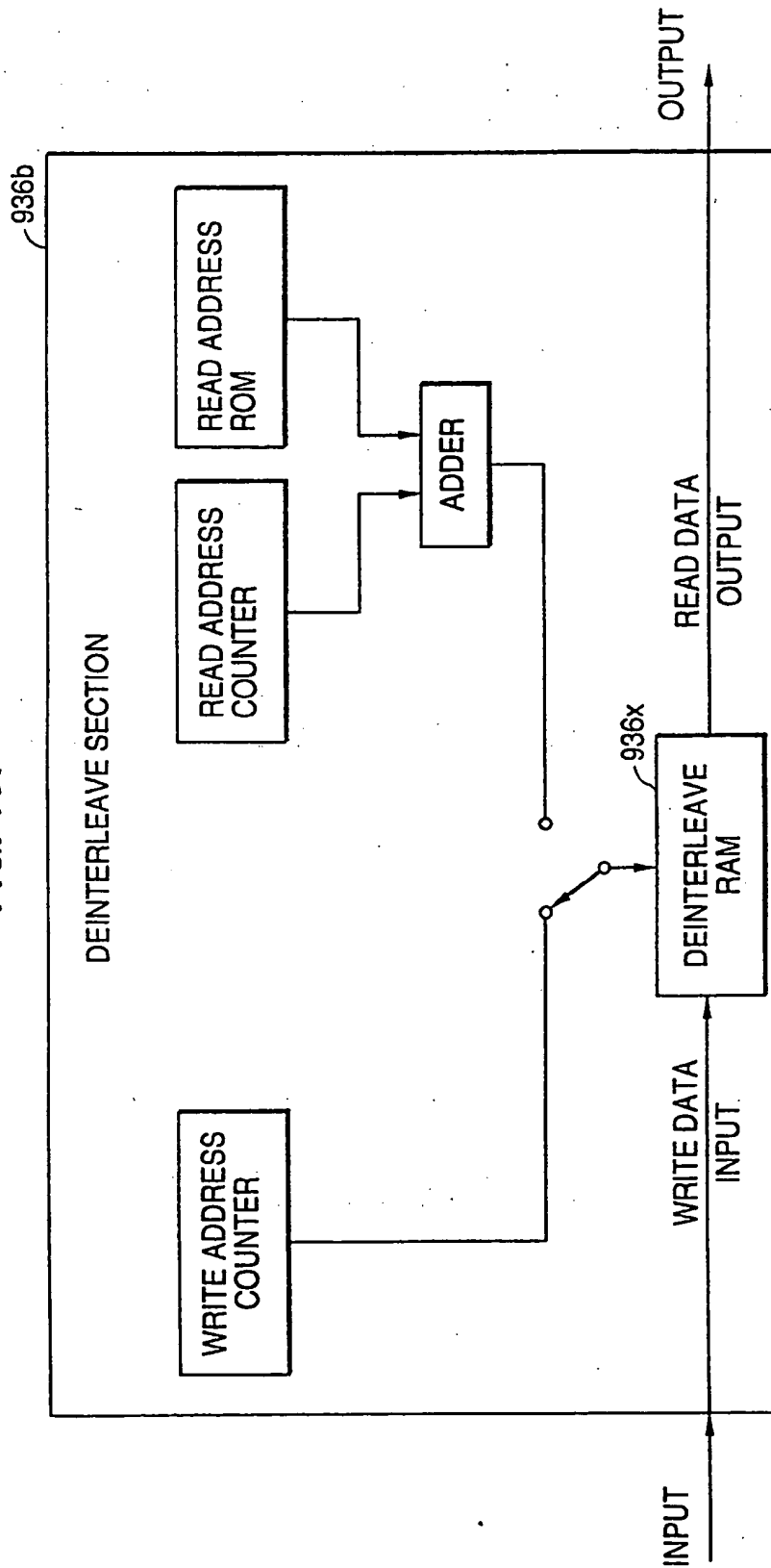


FIG. 168(a)

INTERLEAVE TABLE

1	2	3	4	5	6	7
DATA						C2 PARITY
1	A 1	A 2	A 3	A 4	A 5	A 6
2	B 1	B 2	B 3	B 4		
3	C 1					
4	D 1					
5	E 1					
6	F 1					
C1 PARITY	PARITY	PARITY	PARITY	PARITY	PARITY	PARITY

FIG. 168(b)

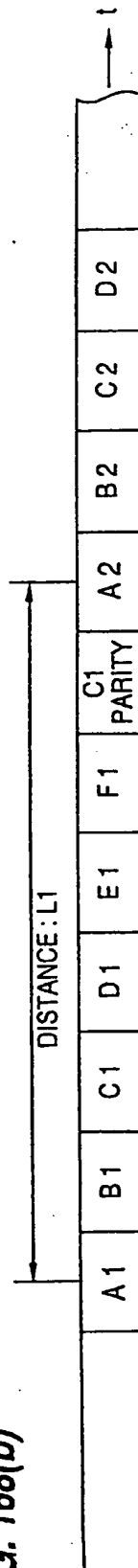


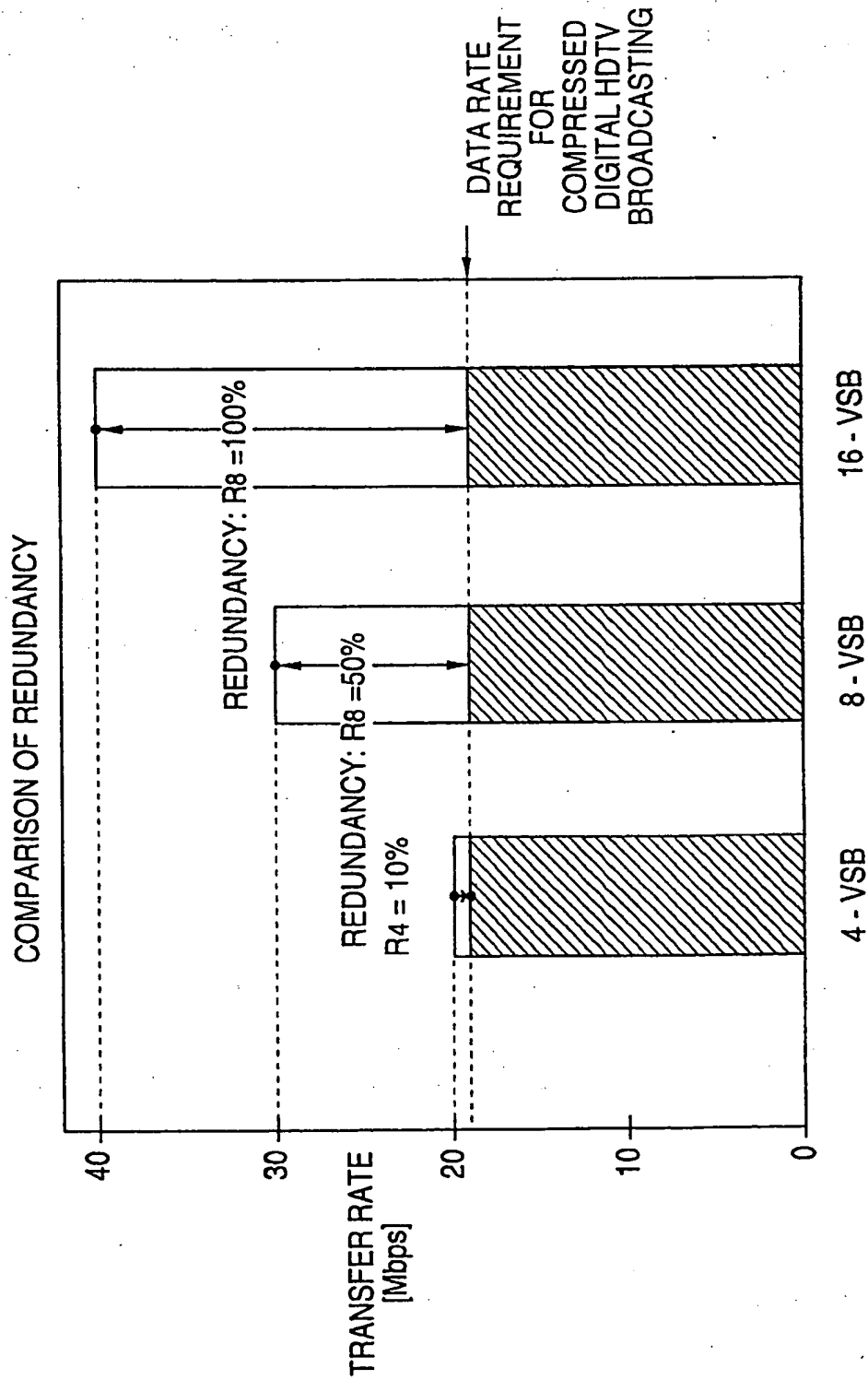
FIG. 169

FIG. 170

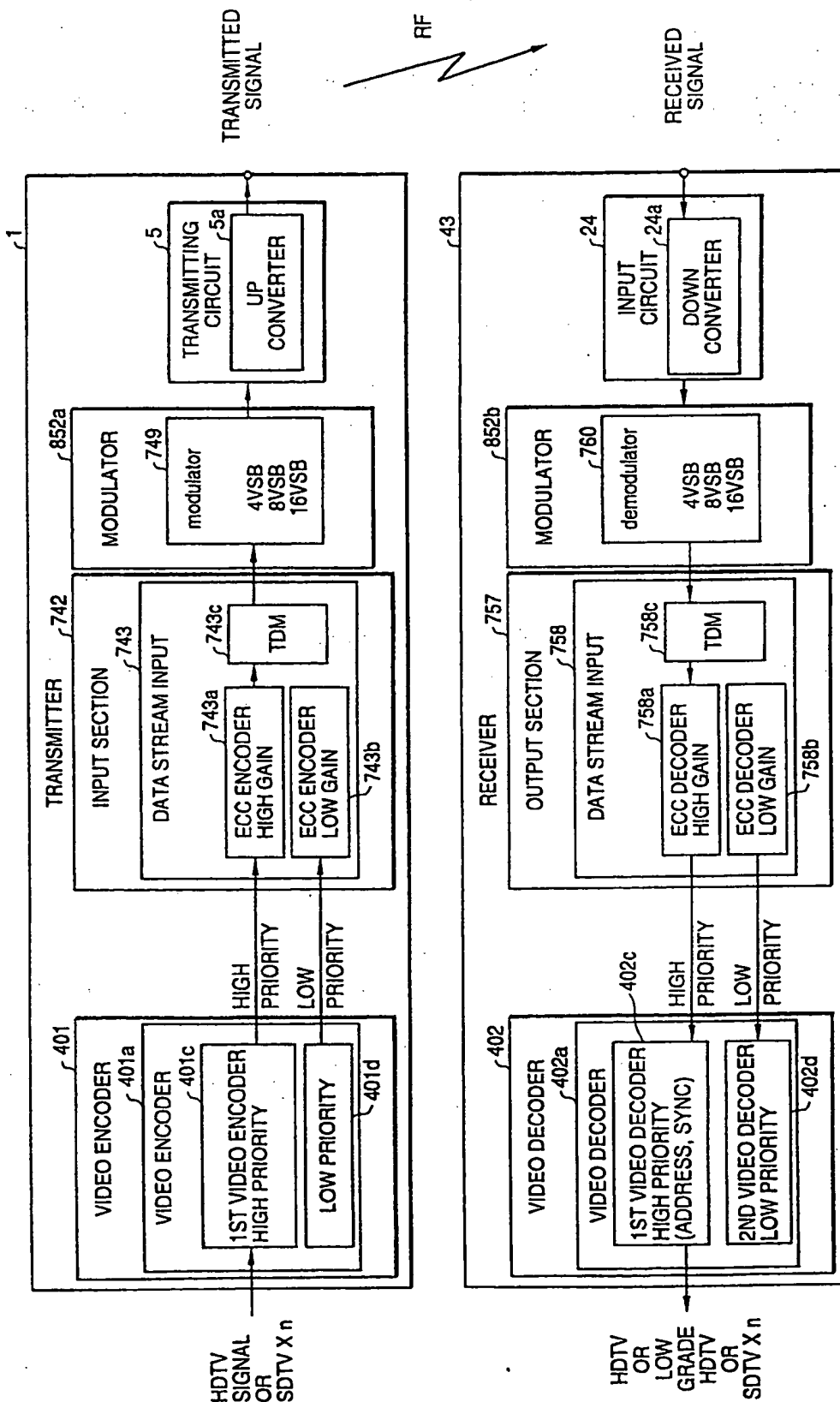


FIG. 171

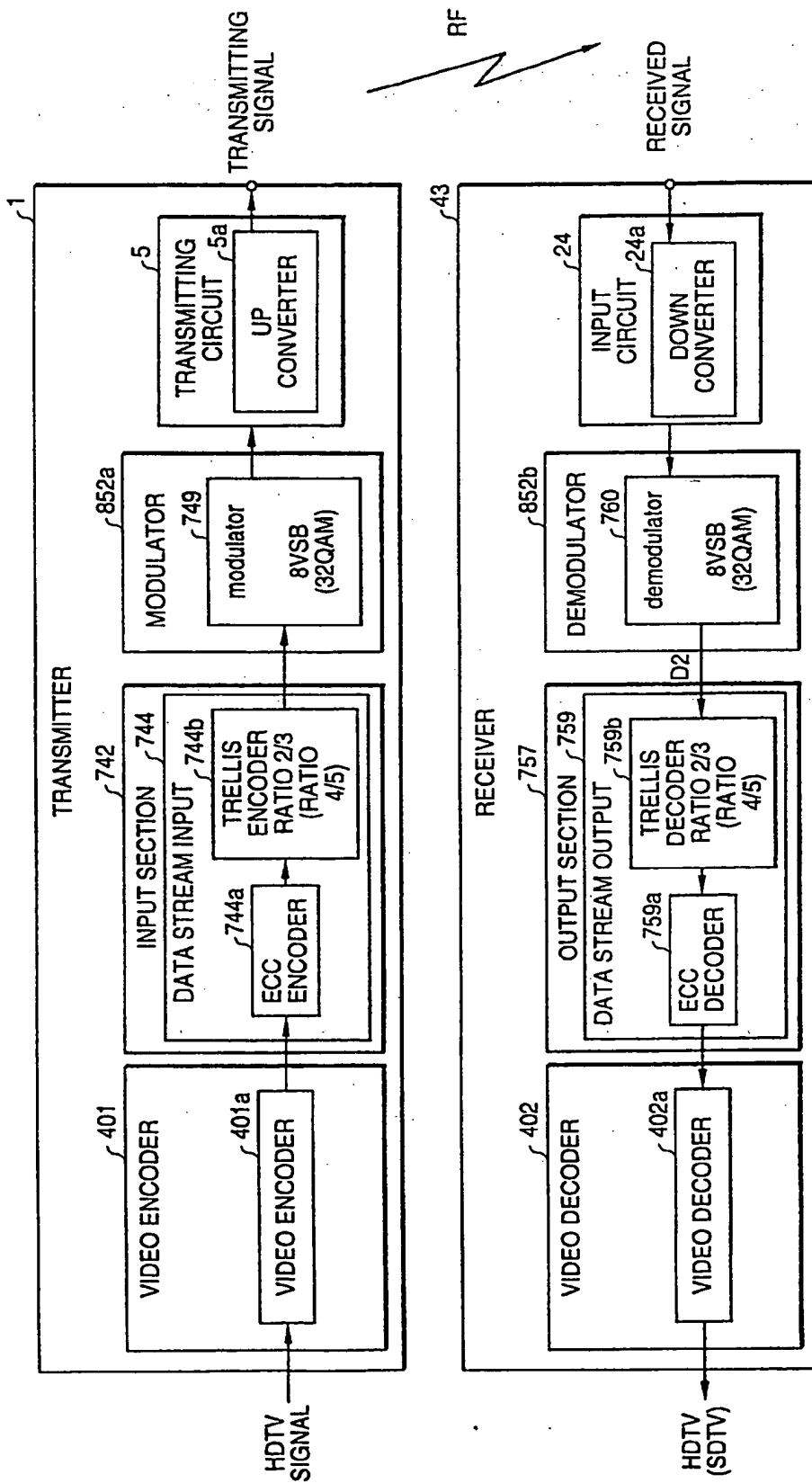


FIG. 172

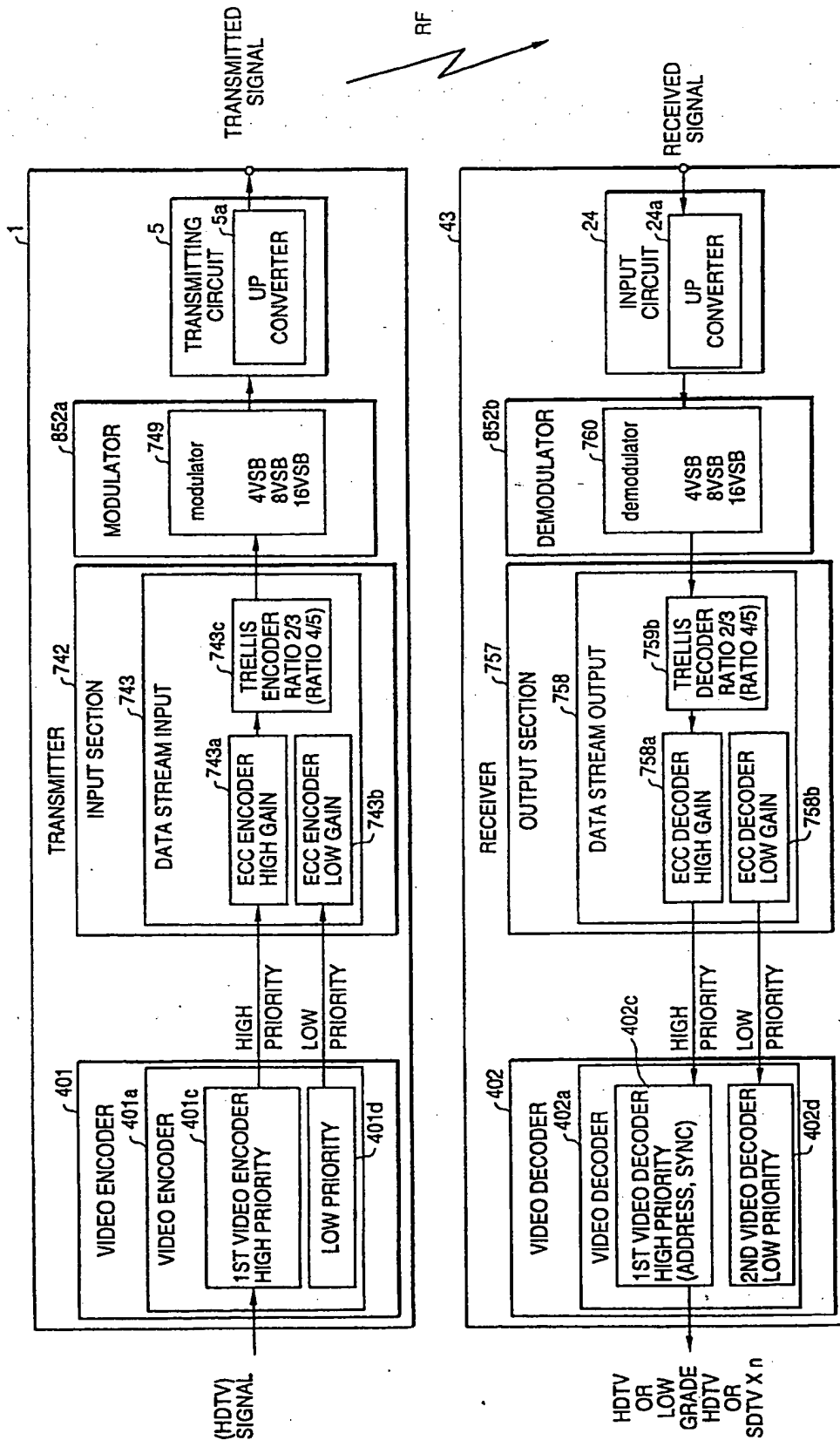


FIG. 173

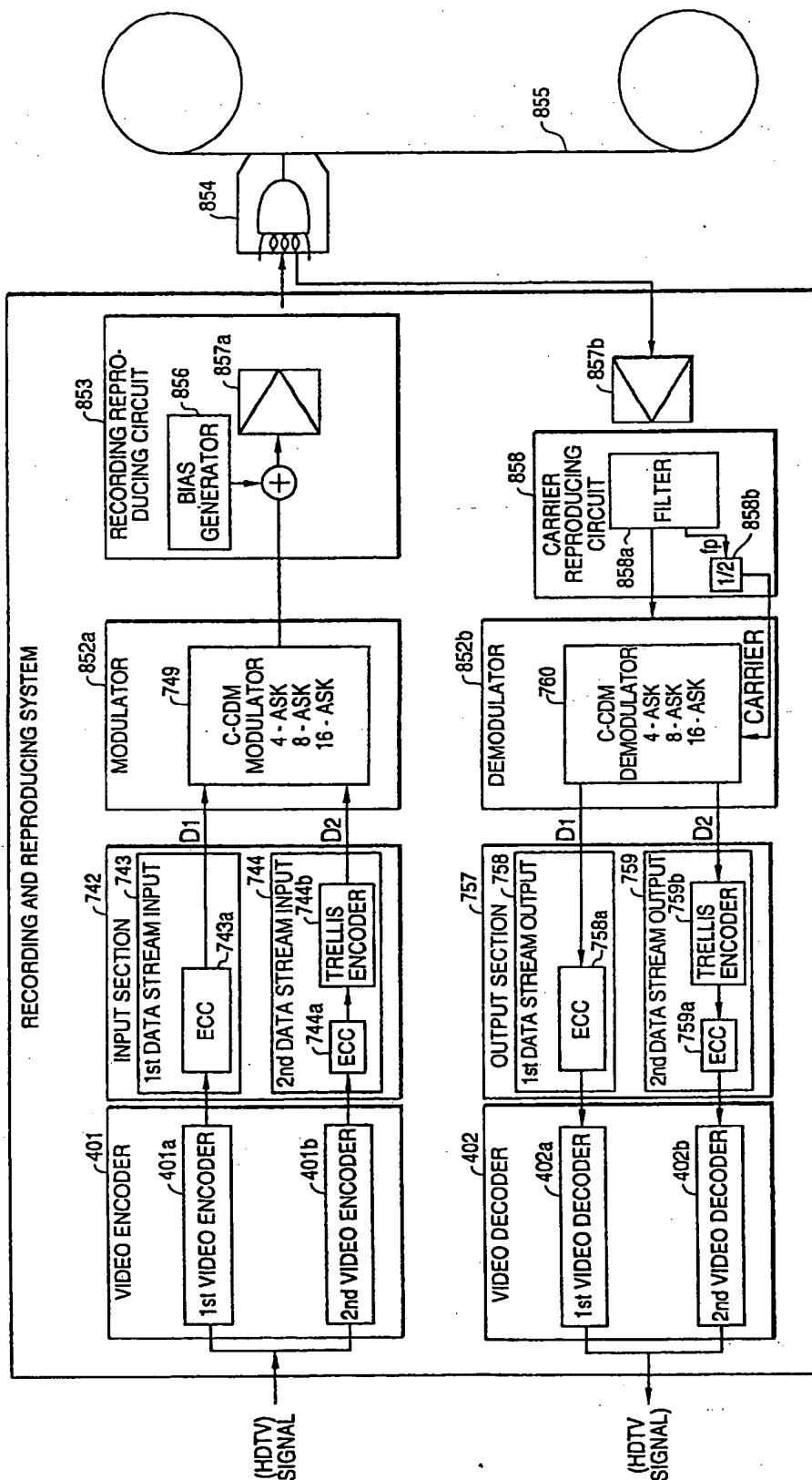


FIG. 174

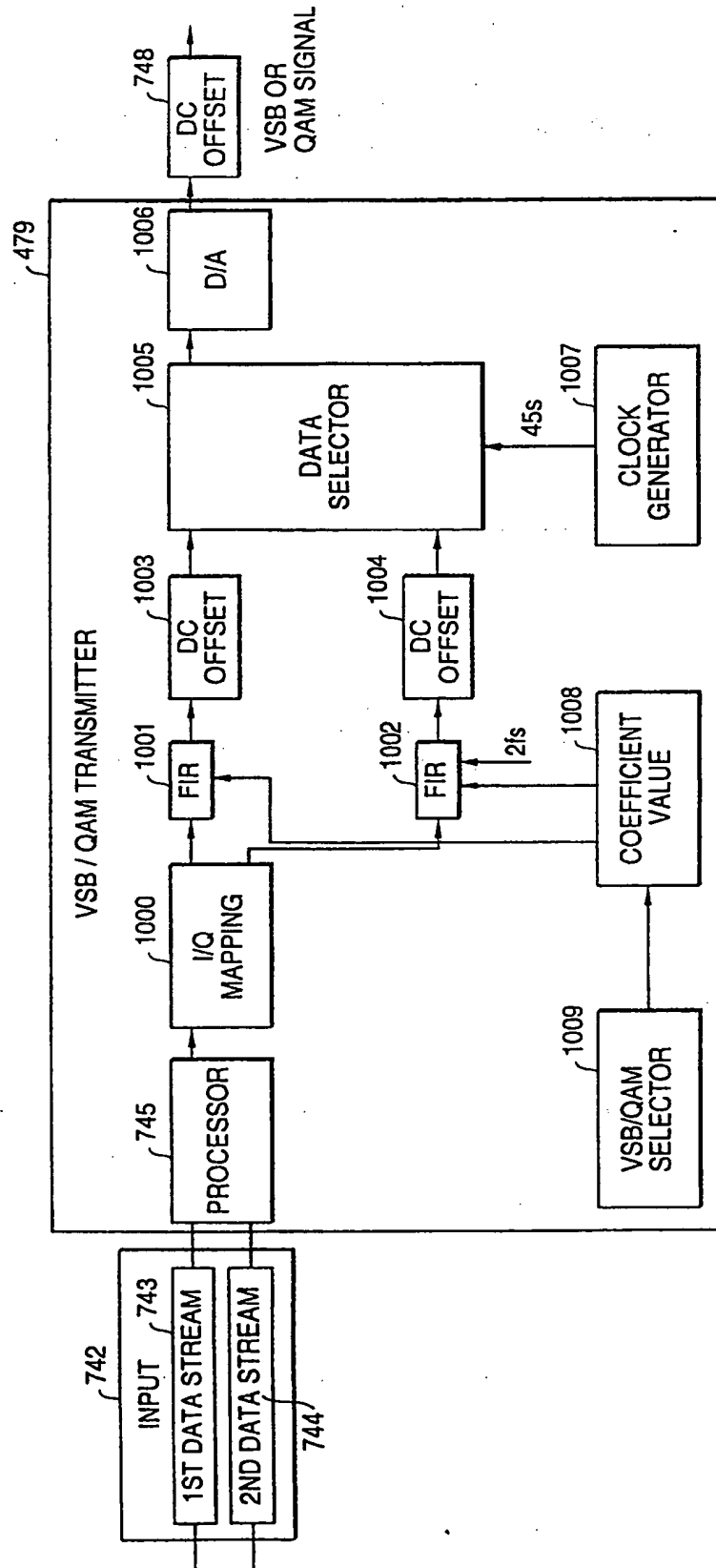


FIG. 175

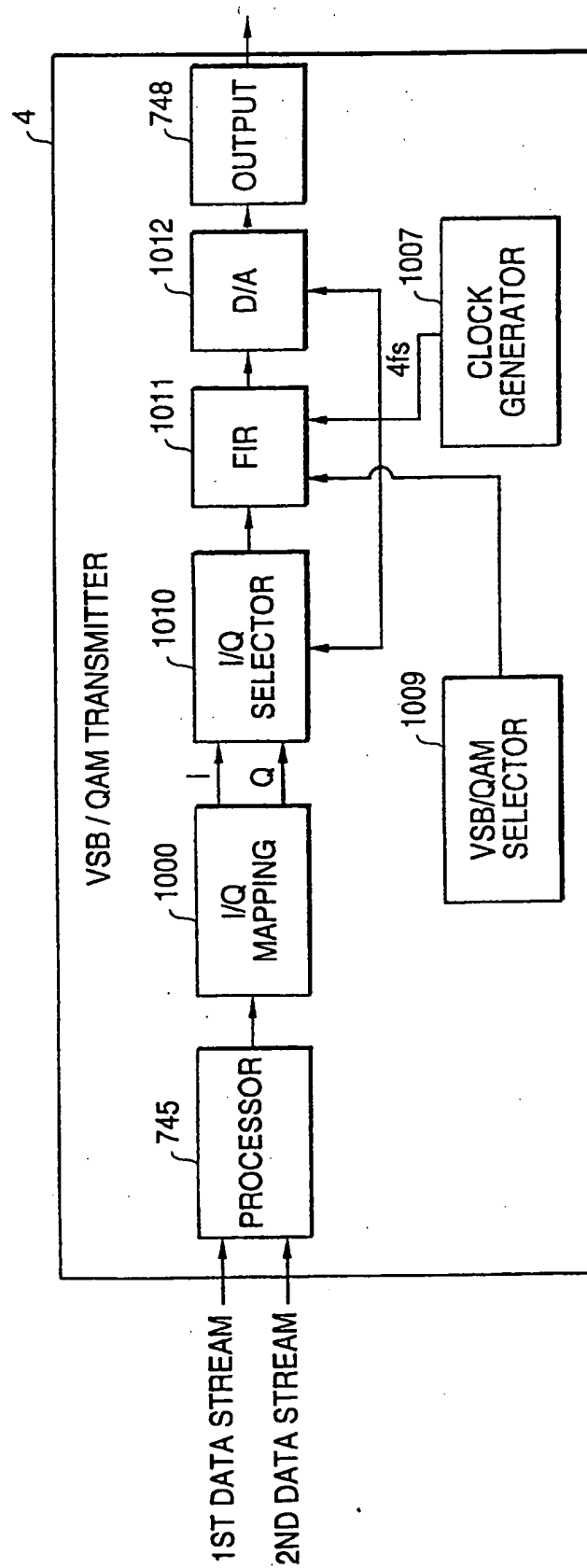


FIG. 176

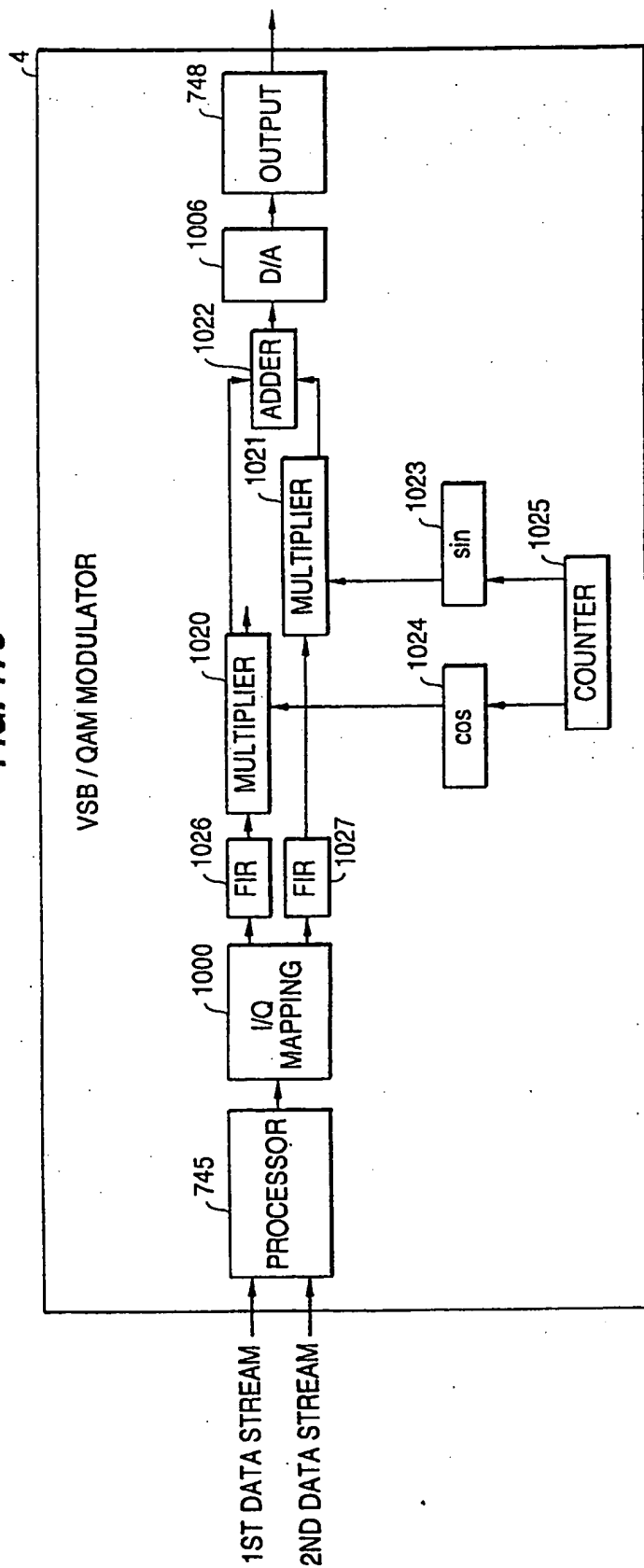


FIG. 177

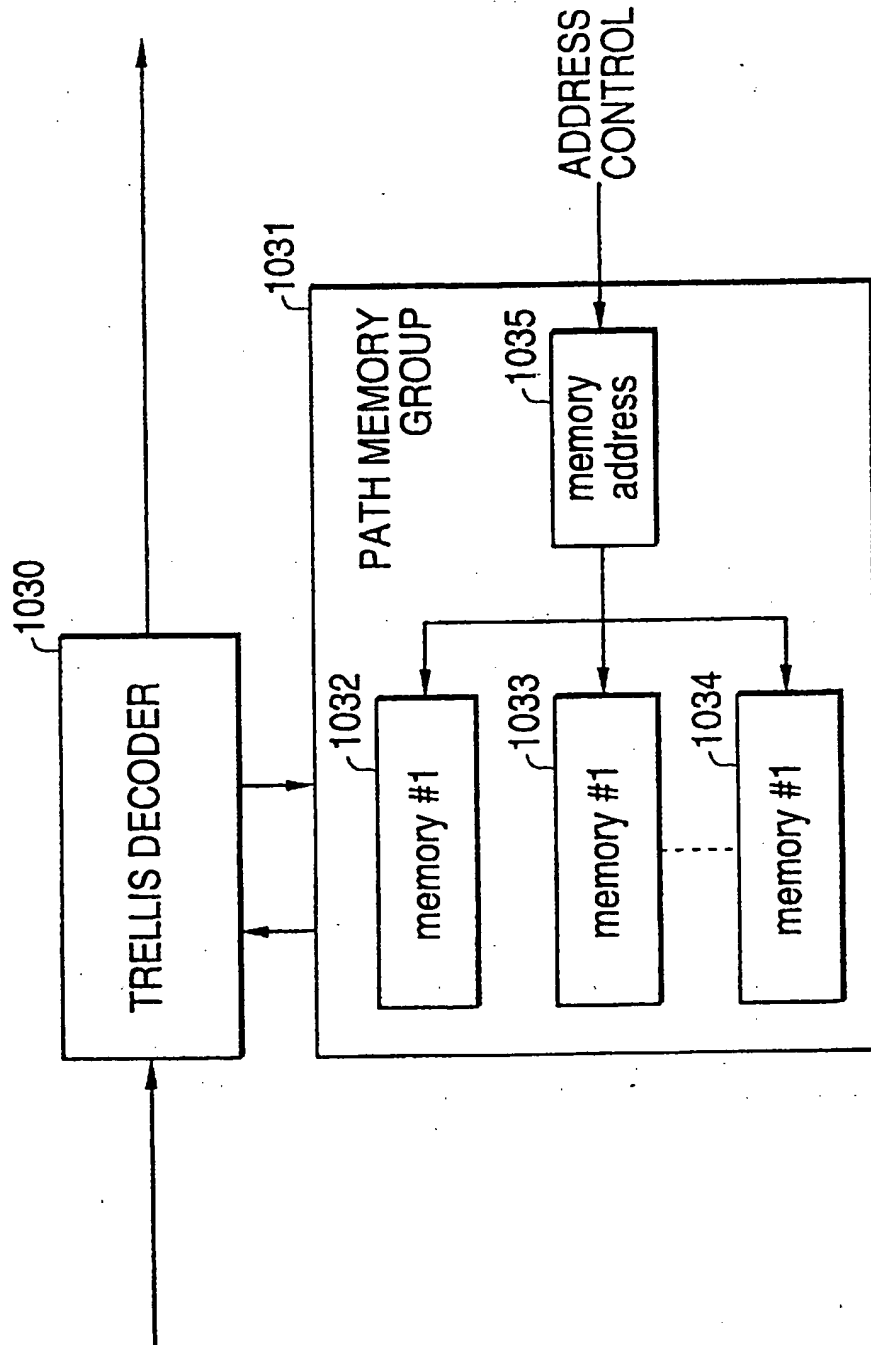


FIG. 178

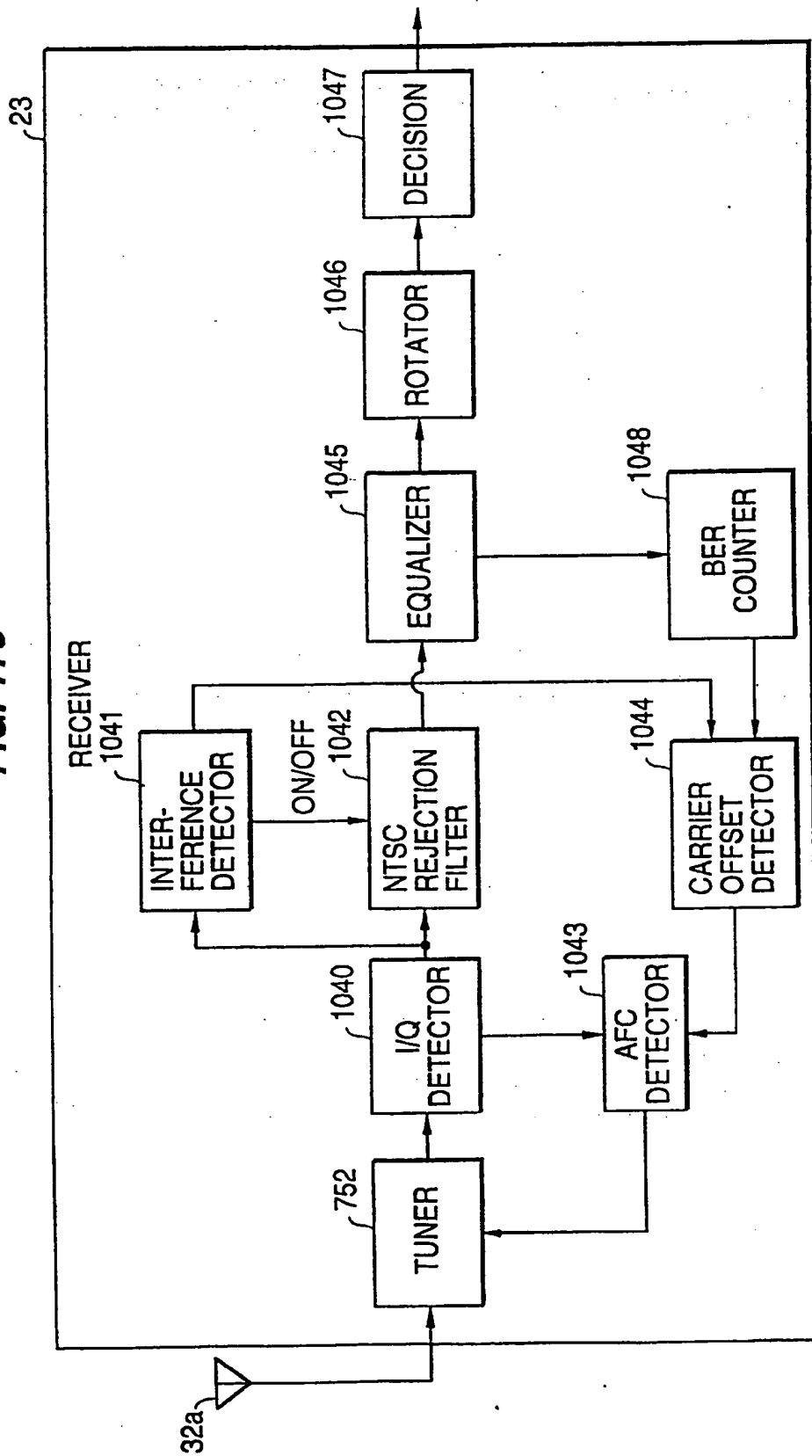


FIG. 179

